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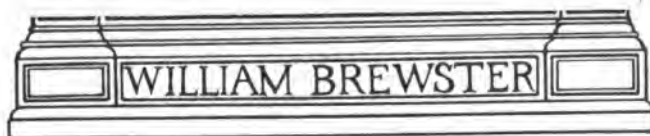
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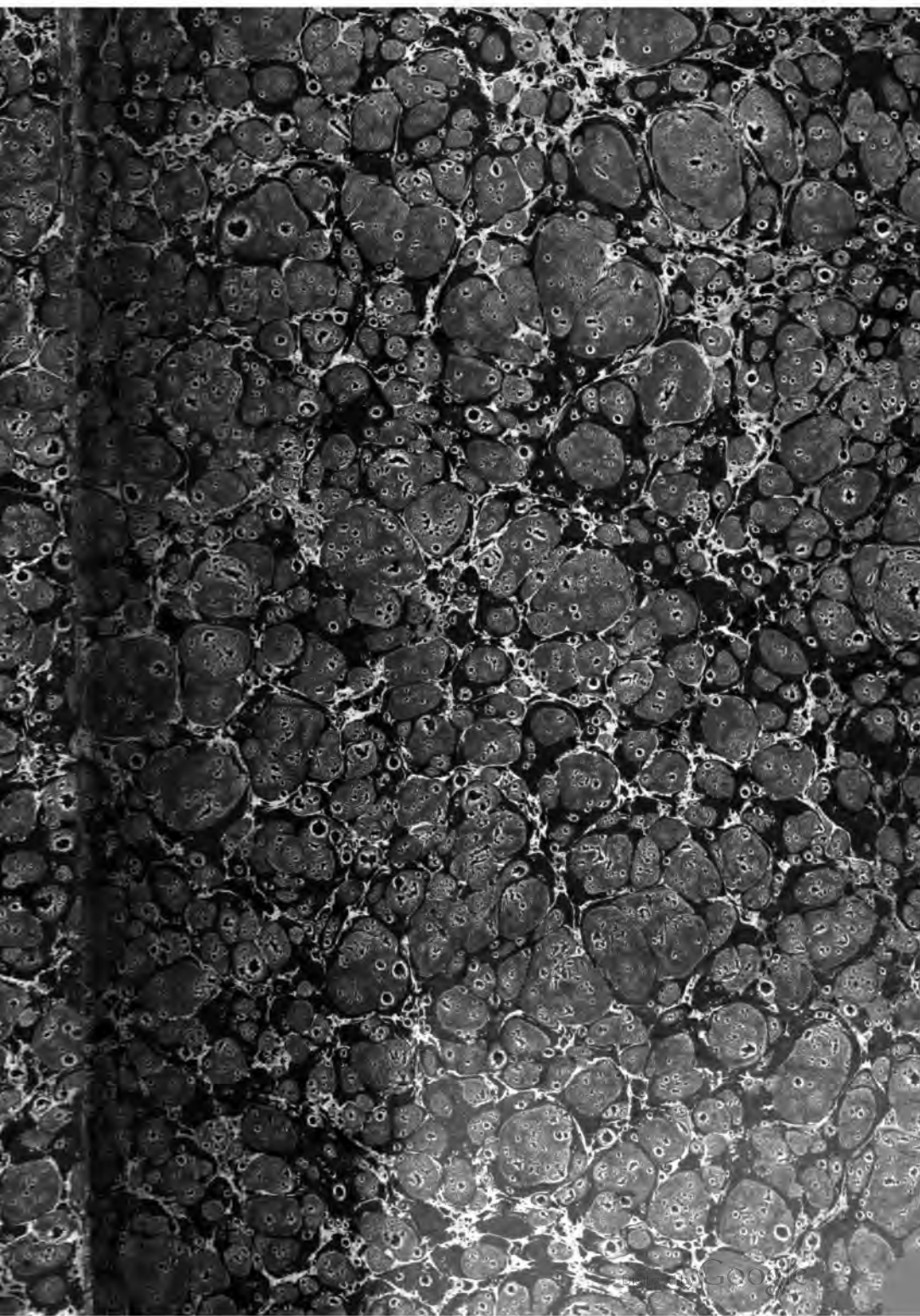
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THE CANADIAN SPORTSMAN

AND

Naturalist:

A MONTHLY JOURNAL.



MONTREAL, JANUARY 13, 1881.

Contents :

	Page.
To Sportsmen and Lovers of Natural History	1
Salmon and Trout Rivers and Lakes of Quebec	2
Wholesale Slaughter of wild Ducks	3
Our Journal	3
In Prospect	3
Province of Quebec	3
A Good Fit	3
Death of the Editor of "Land and Water"	4
Montreal Branch of the Entomological Society of Ontario	4
Ornithology of Mount Royal	5
The Barred Owl	5
Woodcock in December	6
Report on Nomenclature	6

THE CANADIAN SPORTSMAN AND NATURALIST.

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THE CANADIAN SPORTSMAN AND NATURALIST.

No. 1.

MONTREAL, JANUARY 15th, 1881.

Vol. I.

TO SPORTSMEN AND LOVERS OF NATURAL HISTORY.

There is an evident demand for a lively journal devoted to our Field Sports and Natural History. The Canadian sportsman, properly speaking, never had a recognized paper where-by he could communicate his experiences. Newspapers as a rule took a daily public interest in matters of this nature, but a future reference to their columns has invariably been lost. This will not be the case with the **SPORTSMAN** which is printed in proper form, may be filed, bound or become a historical document. Besides, the greater part of the original matter written on this side of the St. Lawrence, referring to our Sporting matters and Natural History, has been generally posted to American scientists or to journals published in the United States; therefore, the literary talent produced by and properly belonging to this class of our intelligent manhood, has been absorbed through other channels. We are anxious to obviate this, hence the issue of the **CANADIAN SPORTSMAN AND NATURALIST**.

Our columns are therefore open to correct brief reports on Field Sports, and matters relating to Canadian Natural History. We intend to give accurate accounts of the large four-footed game; such as the Moose, the Woodland and Barren-ground Caribou; the Virginian Deer, and smaller quadrupeds. Another object in so doing, is to make an effort to harmonize the Game Laws of Canada, particularly those of the Provinces of Ontario and Quebec.

Ornithology and Oölogy, combining descriptions and remarks on our Northern Birds, their nests and eggs, will take up a portion of our space during the summer season of 1881. Thenceforth the other branches of Natural Science will be periodically attended to.

Our columns are open to writers on the delightful and exciting sport of fishing for Salmon, Trout, and other species of fish that rise to the fly. The most prolific lakes, rivers and localities will be carefully and correctly described. We intend to give an easy and inexpensive way to reach them. Lists of the food fishes found in our inland and maritime waters will be given, together with notes relating to them.

Next we approach Entomology—a branch of natural study containing forms of great interest, and at this age, studied more than any other terrestrial life. It is possible that the Editor who is now studying the *Solitary Wasps of the North*, will be able to describe some additional forms to the already important work on this class of American insects, by Henri de Saussure, of Geneva, Switzerland.

During the first year's issue, the monthly number of our pages will be necessarily confined to eight, but should the journal succeed in attaining the anticipated support which we desire, it will be enlarged to sixteen pages of interesting matter. Now, its existence rests with our sportsmen and students of Natural History; give it your support, and we will furnish you with a neat, well-conducted, spirited periodical, which will reach you regularly every month.

In a former part of our notice we stated that the situation of the Salmon Rivers of this Province would be accurately given, with descriptions of the pools and their distance from the coast. We have done so partly in this issue, in order that European, American and Canadian lovers of fishing may take advantage of these favorite localities during the season of 1881.

The Editor of the **SPORTSMAN** has had experience on the southern coast of Labrador, therefore, gentlemen wishing to visit the rivers hereinafter mentioned, may rely on *bona fide* sport.

SALMON AND TROUT RIVERS AND LAKES OF QUEBEC.

It may be said that in former times salmon visited the greater portion of the Northern rivers entering the St. Lawrence above and below the city of Quebec. Some of these rivers are not now frequented by salmon. It is only of late years, however, that the Jacques Cartier became worthy of being leased for surface fishing. We are informed that under proper management and good guardianship, the pools on this river are prolific with fish that give excellent sport. Years ago, the small river known as the St. Charles, at Quebec, was considered a salmon stream, but none have been in it for seasons gone by. The Editor killed a grilse in the St. Charles, near Lorette, about fifteen years ago. Very large trout (*S. fontinalis*) has been taken by the fly from beneath the falls of Montmorenci. Doubtless, these were forced down the river when small, and having lain in the cool surging pool, the fish became fattened and large.

Salmon enter the St. Anns, but on account of lofty falls, they cannot follow the river to a great distance. This river has been greatly poached in the neighborhood of Bonquet's Bridge.

There are other salmon rivers of minor importance, entering the St. Lawrence below St. Anns, and some of them are pronounced good, but we believe that there has been too much netting of late years [on the coast, and hence the old reliable good score rivers have suffered. This may be considered a mere opinion; however, it will be our object to fully investigate the cause of last season's scarcity of the noble fish. We are anxious to have the opinion of men of old experience.

There are two ways of reaching the salmon rivers between Bersimits and Natashquan. This is done by means of sailing mail packets—one leaving the long wharf at Rimouski on the 1st and 15th of each month, from May to September. The other packet leaves Gaspé Basin on similar dates. The Rimouski

packet calls at Bersimits, Godbout, Trinity Bay, Seven Islands and the Moisie River. The captain charges one dollar per passenger crossing the St. Lawrence, the latter to supply his own provisions during the passage. The Gaspé packet is supposed to call at the west and east ends of the Island of Anticosti alternately—that is to say, one trip to English Harbour on the west end, and the following trip to Fox Bay on the north-east end; thence across to Natashquan, Point Esquimault, Mingan and other rivers on the same coast. The charge for the passage from Gaspé to Anticosti is four dollars, with board.

Now that we have introduced these matters in regard to fishing localities, the continuation of our remarks on the salmon rivers will appear in the February number. In the meantime, we will occupy a portion of our space with a description of the beautiful trout lakes situate north of Montreal.

We will first mention the region of the Upper Assumption River, where numerous lakes abound, containing beautiful rich-flavoured trout. It is difficult to reach the lakes of the Northern Laurentian districts, on account of rugged woodland and rocky surroundings, there being no roads leading from civilization but what are generally used on both sides of the river as Indian paths to the upper waters. With a good guide a series of mountain lakes can be reached in a day's walk from Manning's farm, taking along a canoe or two. Any lake will offer abundant sport. The upper portion of the Assumption river abounds in trout averaging from a quarter to two pounds weight. There is another grand scenic locality which we have visited, where the lakes are alive with large luscious trout; these are situated on each side of the colonization road leading to the Mattawan. The Black River runs for several miles along the side of the road and its pools and rapids are teeming with game fish; therefore, as a summer resort for fishing, this region cannot be surpassed. To reach the mountain lakes, it will be necessary

in starting from Montreal to take the steamer "Berthier," from the wharf opposite the Bonsecours Market, to Lanoraie, where a railway carries passengers, &c., to Joliette. At this village a team is necessary to carry the sportsmen and traps to either Manning's farm or Mr. Leprohon's house on the Black River Road, which leads through the trout lake region towards the Mattawan. We will continue this subject in the February number.

WHOLESALE SLAUGHTER OF WILD DUCKS.

Among the various devices resorted to for the destruction of our Wild Fowl, the swivel gun is perhaps the most destructive in its effects. Great numbers of wild ducks are annually slaughtered by its means, and the genuine Sportsman must view with alarm the rapidly decreasing numbers of the birds in the localities where it is used. For the past two or three seasons several American steam yachts, armed with these guns, have been cruising in Lake St. Francis, near Lancaster, Ont., and have apparently done a remunerative business in supplying the American markets with birds. The *modus operandi* is to steam slowly towards the large flocks, or "rafts" of ducks, on their feeding grounds in the lake, and as they are then usually in compact flocks, a great number are secured at a single discharge. As many as 50 to 100 being often bagged at a shot; while, as a matter of course, a great many are wounded, and but few of these are secured, the operations of these pot hunters being conducted on too large a scale to allow of the pursuit of single birds. It is needless to state that this system of shooting has already been productive of a great amount of harm, and if persisted in will spoil to a certain extent the duck shooting on our lakes. We therefore trust, before the advent of another season, the Game Societies of Ontario and Quebec will have taken the matter in hand and devised some means whereby the slaughter

may be prevented, and the rapidly diminishing birds be conserved for the legitimate sportsman.

WALLACE.

OUR JOURNAL

will sustain properly defined Game Laws of the Dominion of Canada. It will also extend a cordial hand of fellowship to all well organized game clubs. We fully trust in its success, and now wish our patrons happiness and prosperity, with plenty of sport during the season of 1881.

IN PROSPECT.

A gentleman lately returned from the Northwest Territories promises to send us some interesting and truthful accounts of the game noticed in the regions through which he passed last summer. We will endeavour to procure it for the February number.

PROVINCE OF QUEBEC.

GAME IN SEASON—JANUARY.

Caribou, Virginian Deer, Moose and the common Hare.

Ruffed and Spruce Grouse, Wild Geese and Ducks.

FISH IN SEASON—JANUARY:

Whitefish, Salmon-Trout, Speckled, Brook or River Trout, (*S. fontinalis*), Bass, Doré, Maskilongé.

NOTE.—Every net licence issued by the Department at Ottawa, states as a condition of the issue, that its use for the capture of Bass, prior to the 1st of July, is prohibited.

A GOOD FIT.

In the selection of a gun, the inexperienced Sportsman is apt to overlook one of the most important features required. For rapid and accurate shooting, it is necessary that the stock of the gun be curved to suit the length of neck of the marksmen. To fit properly, the gun, when raised to the shoulder should be almost on a level with the eyes, requiring but a slight

bend in the neck to enable the sportsman to cover the object aimed at. Before the introduction of breech loaders it was a difficult matter to procure a gun with the necessary curve, and even at the present time, the greater number of those manufactured are too straight in the stock to suit the average neck.

The various improvements in the manufacture of guns made during the past few years, leaves little to be desired, and the reputation for excellence of work, achieved by some of the most celebrated makers, leaves little room for criticism. The Sportsman has now no difficulty in procuring a good article; let him be careful in his selection, recognize the importance of a proper fitting gun, and the result will be an increased pleasure in his sport,—a pleasure engendered by success.

WALLACE.

DEATH OF THE EDITOR OF "LAND AND WATER."

The death of Francis Trevelyan Buckland, better known as Frank Buckland—announced from London, has been expected, as he has been in wretched health for some time past. His father, the geologist, Dean of Westminster, a most accomplished man, lost his reason some time before his death. Frank Buckland, who was born in 1826, was a student of Winchester College and afterwards at Christ Church, Oxford. The larger part of his life was given up to the study of the natural sciences, and he was a recognized authority upon the habits and culture of the food fishes. Few men of science were so popular in England. He was a public benefactor through his introduction of new varieties of fish for food and especially through his successful cultivation of salmon and trout. In social life he was one of the most charming of men, despite the fact that his house was really a kind of combination of the Aquarium with the Zoological Gardens, so full was it of birds and beasts and fishes. Whoever loved him loved him perforce, not his dogs only, but his cassowaries and his

crocodiles. The story might have been told of him which was true of Agassiz, that when his wife one morning found in one of her slippers a cold little slimy snake, one of six sent the day before to her scientific spouse, and carefully set aside for safety by him under the bed, and upon the startling discovery started back, crying out in terror, Agassiz! Agassiz! there is a snake in my slipper!" the response of the *savant* was, as he rose suddenly up from his couch: "A snake! Good heavens, *where are the other five?*" At home Frank Buckland sat in a cumbrous old chair which he valued highly because it had once belonged to the famous John Hunter. Its uncomfortable angles were disregarded by him—they were convenient for the monkeys. These small men sat aloft, and were free to pounce down on his proof sheets at will. A retired organ monkey was a great favorite, and shared with the afflicted but always cheerful *savant* the frugal meals to which physicians limited him, tasting everything in turn, even to the claret and water.—*N. Y. World*.

MONTREAL BRANCH OF THE ENTOMOLOGICAL SOCIETY OF ONTARIO.

The seventy-ninth meeting of the above Branch took place on the evening of the 11th inst., at the residence of H. H. Lyman, Esq., "Thornhill," McTavish Street.

An accurate and interesting paper was read by Mr. George H. Bowles, "On the mouth-parts of some carnivorous and wood-eating Beetles," with very excellent illustrations of dissections.

It was moved by Mr. Couper, seconded by Mr. Lyman, "That the paper just read, with the accompanying illustrations, be sent to the *Entomologist* for publication.—*Carried*."

Mr. H. H. Lyman exhibited his very fine collection of Insect Architecture, the only one of the kind in the city.

Mr. Burland, jr., was elected a member.

Natural History.

ORNITHOLOGY OF MOUNT ROYAL.

A ramble over our beautiful Mountain Park, and Cemeteries will well repay students of Ornithology, and Oölogy. The summit is 750 feet above the level of the river, and commands a view of one of the most magnificent landscapes on this continent. The noble river St. Lawrence, is seen for a long distance, and beyond Belœil Mountain rises majestically above the surrounding valley; on the south side, the view is bounded by the long range of mountains in the State of New York.

The writer spent many pleasant days last summer, observing the birds that frequent and breed on Mount Royal, and identified thirty-eight species. Those marked with an asterisk, do not breed on Mount Royal, but are frequently seen there. Several other species were observed, but not having been fully identified, are left out for a future note this coming spring. The following list contains the names of the thirty-eight species identified:—

Robin.....	<i>Turdus Migratorius.</i>
Wood Thrush.....	<i>Turdus Mustelinus.</i>
Catbird.....	<i>Mimus Carolinensis.</i>
Eastern Bluebird.....	<i>Sialia Sialis.</i>
Golden-crested Kinglet*.....	<i>Regulus Satrapa.</i>
Black-capped Chickadee.....	<i>Parus Atricapillus.</i>
Red-bellied Nuthatch.....	<i>Sitta Canadensis.</i>
Brown Creeper.....	<i>Certhia Familiaris.</i>
Winter Wren.....	<i>Anorthura Hyemalis.</i>
Black-and-white Creeper.....	<i>Mniotilta Varia.</i>
Summer Warbler.....	<i>Dendroica Aëtiwa.</i>
Chestnut-sided Warbler.....	<i>Dendroica Pennsylvanica.</i>
Golden-crowned Thrush.....	<i>Sciurus Aurocapillus.</i>
Redstart.....	<i>Setophaga Ruticilla.</i>
Bank Swallow.....	<i>Cotyle Riparia.</i>
Purple Martin*.....	<i>Progne Purpurea.</i>
Cedar Bird.....	<i>Ampelis Cedrorum.</i>
Great Northern Shrike.....	<i>Collurio Borealis.</i>
American Goldfinch.....	<i>Chrysomitris tristis.</i>
Song Sparrow.....	<i>Melospiza Melodia.</i>
Snowbird.....	<i>Junco Hyemalis.</i>
Chipping Sparrow.....	<i>Spizella Socialis.</i>
English Sparrow.....	<i>Passer Domesticus.</i>
Indigo Bird.....	<i>Cyanospiza Cyanea.</i>
Cowbird.....	<i>Molothrus Ater.</i>
Baltimore Oriole.....	<i>Icterus Baltimore.</i>
Crow Blackbird.....	<i>Quiscalus Purpureus.</i>

Common Crow.....	<i>Corvus Americanus.</i>
Kinebird.....	<i>Tyrannus Carolinensis.</i>
Phoebe.....	<i>Sayornis Fuscus.</i>
Nighthawk*.....	<i>Chordeiles Virginianus.</i>
Chimney Swift*.....	<i>Chaetura Pelagica.</i>
Ruby-throated Hummingbird.....	<i>Trochilus Colubris.</i>
Black-billed Cuckoo.....	<i>Coccyzus Erythrophthalmus.</i>
Downy Woodpecker.....	<i>Picus Pubescens.</i>
Yellow-bellied Woodpecker.....	<i>Sphyrapicus varius.</i>
Golden-winged Woodpecker.....	<i>Colaptes Auratus.</i>
Ruffed Grouse.....	<i>Bonasa Umbellus.</i>
ERNEST D. WINTLE.	
Montreal, Jan., 1881.	

THE BARRED OWL.

This bird was, last month, abundant in the neighborhood and city of Montreal. We have no recollection of seeing so many near another city in Canada. It is a day owl, and its occurrence in the vicinity of civilization may possibly be on account of the House Sparrows, which have multiplied greatly of late. The latter are easily caught during the winter, and doubtless a nice morsel for the owls. The common haunts of the Barred Owl are dense woods—they are not pelagic—loving the northern forests, but during winter, hunger will force all woodland animals to retreat from their solitudes. The abundance of the House Sparrow has also induced an unusual number of another enemy to remain in our neighborhood. The Shrike or Butcher Bird. Persons who have read the history of this bird can well understand that he would be a greater foe to the Sparrow than the more clumsy owl. Here we see a natural law faithfully carried out in order that each species may be benefited, even as parasites, retaining an equal balance in their sphere.

THE GRAY SEA EAGLE.

A large specimen was shot on the 28th December, at the village of Cowansville, while in the act of carrying off a chicken from a farm yard. This eagle is the *Haliaeetus albicilla* of Cuvier, a bird of doubtful specific position at present. Its habits are similar to that of the Bald Eagle. It is the property of J. I. Newport, Esq., of this city.

WOODCOCK IN DECEMBER.

Early on the morning of the 16th December a man captured a woodcock which was running on the ground in the vicinity of Beaver Hall Terrace in this city. This fact would not have been ascertained, were it not for the numerous telegraph wires which surround the streets. During the previous night, the bird, in its southern flight, struck against a wire with force sufficient to take off the skin and feathers, from the front portion of the head, above the base of its beak. Many woodcock are killed in the spring and fall by telegraph wires, as they migrate only at night, and generally fly low. The bird was brought to the SPORTSMAN Office, the man being ignorant as to its name. Having no immediate accommodation for this interesting game bird, we sent it to Mr. Hall's restaurant, on St. James street, where it was living on Christmas eve. It may not be generally known to Sportsmen or Naturalists, that the woodcock has the power to erect about half an inch of the upper mandible, without opening the beak to its base. It appears as if the bird was supplied with a flexor nerve to elevate the tip of the upper mandible. This feature was quite remarkable in the above specimen. It is supposed that these late woodcock have been living in the vicinity of warm springs on the Laurentian Mountains.

REPORT ON NOMENCLATURE.

We have received the Third Annual Book of the Michigan Sportsman's Association for 1880. It contains ninety-seven pages of interesting matter. Considering the fifth Committee Report valuable to Canadian Sportsmen and Naturalists, we publish the first portion in this issue of our journal.

Your Committee on "Nomenclature, both Popular and Scientific," would respectfully report: That uniform and correct names *should* be habitually employed in speaking and writing of the different species of game. On account of the loose way of naming animals

in vogue in this country, many otherwise well-written articles become quite unintelligible. In reading of field sports we are constantly in the position of Mr. A., who was informed by his friend B. that he had just scooped Mr. Johns of a cool \$100 at poker. Mr. Johns being A.'s clergyman, and a very exemplary man, an explanation was demanded, when it was ascertained that it was not Mr. Johns at all that had been relieved of his money, but Jones, the gamester. Such carelessness in the use of names is reprehensible and never necessary. And yet in writing of game, one will give a description of a day with the partridges. As there are two species of birds called by that name, we are left in doubt as to which he means. Another has been shooting elk. Does he mean wapiti, or the true elk, commonly called moose? Another has caught a fine string of pickerel in the clear waters of Niagara river. We doubt the fact and the habitat. On investigation we find he enjoyed the superior sport of taking pike-perch. The same species receive different names in different places, and different species receive the same name. Some kinds are called by names that properly belong to other species, and thus the mixing and muddling goes on. One fish has received nineteen different names within a few hundred miles on the Atlantic coast. Herring are said to be taken in Lake Michigan, when it is known that there is not a herring west of the Niagara river, except such as are brought here dried or pickled. And so we might go on almost indefinitely depicting the ridiculousness of popular nomenclature. But the annoying fact is too well known to require amplification. Nor are we much better off when we turn to scientific classification and nomenclature; for ambitious naturalists are constantly re-arranging both.

What constitutes classification and nomenclature? Accepting the testimony of lexicographers, the first is an arrangement or distribution of groups in classes, orders, families, genera, and species, according to common

relations or affinities : and the second a peculiar system of technical names adopted as descriptive of the first. One, then, must be subservient to the other, yet in intimate relation to it. Again, classification should be an arrangement the most easily adapted to the demands of science, at the same time affording the best means of study and research ; in fact, should be the guide-board on the free road of science, instead of (as it too frequently is) the barrier and stumbling block to progress.

Nomenclature, too, is expected to serve the purpose of an aid to the examination and classification of objects in connection with the laws by which they are governed, and as a means of investigating their structure, history, and uses. For this reason Latin or Greek names were adopted as affording uniformity that could not be attained by the use of common or vulgar designations, and as permitting scientists of all nations to meet upon a common ground, irrespective of profuse lingual knowledge. Whether nomenclature is serving such a purpose, or not, we shall see further on.

Embracing so wide a scope as does natural history, objects animate and inanimate, from the awe-inspiring celestial bodies in their multitude, to the most insignificant of earthly microcosms, and details so numerous that to possess a knowledge of the smallest portions is a competent task for a lifetime spent in study and investigation, it is little wonder that errors are both numerous and constant. Yet this affords no excuse for their unremitting multiplication by individuals of less than two score of years who insist on forcing them upon us regardless of scientific truth or progress. They laugh, sneer, and pooh-pooh, the patiently acquired results of old, staid and carefully plodding and reasoning naturalists to scorn ; and not satisfied with this, only too frequently resort to abusive epithets and vituperative abuse. For what rights has either age or reason that are not subservient to Young America, when full of egotism, he steps upon the stage ?

Our interest as an association is centered

chiefly on those forms of *feræ naturæ* usually denominated game, with, perhaps a minor regard for the fur-bearing species. Individual animals, we feel, demand individual and at the same time appropriate names ; names indicative somewhat of their character—such is the true rule of nomenclature and classification. The better to exhibit relationship, individuals are collected into groups that present the greatest number of characteristics in common such being called *genera*. Genera are further collected under the same general rule into *families* ; families into *orders* ; and orders in turn into *classes*.

Were it possible to arrange all classes in such a manner that the individuals of one genera of an order should be connected more nearly with that order than any other, little would be necessary to render classification both simple and complete. But, unfortunately, it has been found that characters are not sufficiently uniform, and at the same time easily cognizable, to allow the arrangement of all groups of individuals into closely connected families. Aware of this, the great Swedish Naturalist employed one system of organs as the basis of classification. Others have aimed to classify only by the structure of individuals, as a whole, and this latter could it be carried into effect, would seem the most philosophical ; it has been found, however, that either system followed exclusively results in heterogenous combinations. It was like errors that caused the famous controversy between Huxley and Owen a few years since, and which led to the re-classification of mammals. A combination of the two systems is now in vogue as being the least objectionable, and affording the greatest facility in investigating the productions of nature.

The six primary orders of Linnæus are now divided into *vertebrates* and *invertebrates*. Of the former, mammals, birds and fishes alone have special interest for us. Following classification onward, we find mammals divided into classes in accordance with their marked physiological and anatomical peculiarities : and the

reproductive system being the most prominent and permanent in all forms of life, it is justly selected as a basis. *UNGULATA*, for instance, is recognized as a generic order among animals possessing non-deciduous uteri, and its name further signifies that all of this class have all the toes or digits protected by a case forming or approaching to a hoof. Now, the possession of hoofs, of itself, is not of sufficient evidence on which to base an order; but taken, with the peculiarities of diffused or cotyledonary placentæ, of milk teeth, absence of clavicles and other concomitant anatomical idiosyncracies, it has a firm basis; but people at large are not supposed to be familiar with these, while a hoof or a hoof-like tendency is patent to all—hence the title.

By dividing the order *Ungulata* into two sub-orders, we have, *PERISSODACTYLA* (odd-toed) and *ARTIODACTYLA* (even-toed), and approach a step nearer the desired result. The former is further recognized by the possession of not less than twenty-two (22) dorso-lumbar vertebrae, a simple stomach, large cæcum, udders in the groin or inguinal region; and when horns are present, as being entirely epidermal and devoid of bony core, and placed in the centre of the skull; there are also other minor characteristics too numerous for mention in this connection. This order embraces the *Equidae*, or horse family. *Rhinocerotidae*, or rhinoceros family, and *Tapiridae* or tapirs.

The *ARTIODACTYLA*, or even-toed, has two sub-orders, the *Rumantia*, or those provided with compound stomachs, and the *Non-Rumantia*. The former have but one pair of incisor teeth in the upper jaw of the adult, and those the outermost; canine teeth may, or may not be present above, they almost always exist below and are frequently so approximated and inclined forward as to be mistaken for true incisors, which they closely resemble in form; the third and fourth digits are consolidated into one, vulgarly known as the "cannon-bone," and there is an extra metatarsal or ankle-bone, appearing as if the detached distal end of the

fibula; the stomach is compound—"all chewing the cud"—with not less than three more, commonly four, divisions. Of this sub-order we hold the sheep, deer, or ox as a type.

While *Rumantia* might very properly be held as a family instead of sub-order, for convenience sake, and greater ease of approximation, it is divided into the families of *Tragulidae*, *Cotylophera* and *Camelidae*, the former with the false musk deer as a type, the second with deer, antelope, and oxen, and the last embracing camels, llamas, etc.

In turn, *Cotylophera* may be divided into sub-families as *Bovidae*, *Cervidae*, etc., though the anatomical differences are not sufficient to absolutely warrant it; to prevent confusion, however, it is perhaps better so. Next we have the genera *Cervus*, *Bos*, *Ovis*, *Antilocapra*, etc.

As classification now prevails, we have an order, *Rumantia*, embracing families of *Cervidae*, and *Caricornæ*, etc. The latter is usually again divided into sub-families of *Ovinæ*, *Bovina*, *Aplocerina*, etc., and the former given the sub-family of *Cervina*. The *Cervina* embrace the following genera: *Alces* (elk or moose), *Rangifer* (reindeer or caribou), *Cervis*, (wapiti or stag), and *Cariacus* (Virginia, black-tailed, mule deer, etc. The characteristics of the family *Cervidae* are given as "Incisors, $\frac{0}{0}$; canines, $\frac{1-1}{0-0}$, or wanting; molars, $\frac{6-6}{0-0}$; antlers solid, deciduous not encased by horns, sometimes wanting. Foot bifid."

Sub-family, *Cervina*—"Horns solid, always present in males, sometimes in females, not covered with skin; foot bifid, with two small hoofs behind and above the large ones."

Genus *Alces*—"Horns in male only, broadly palmated at tip; nose broad, hairy except small spot between nostrils."

Rangifer—"Horns in both sexes, broadly palmated at tip; nose hairy."

Cervus—"Horns on male only, rarely sub-palmate, curved backward, snags forward, one immediately above the burr; tail short; hoofs broad and rounded."

To be Continued.

THE CANADIAN SPORTSMAN AND NATURALIST.

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W. W. DUNLOP, Assistant Editor.
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The Oologist,

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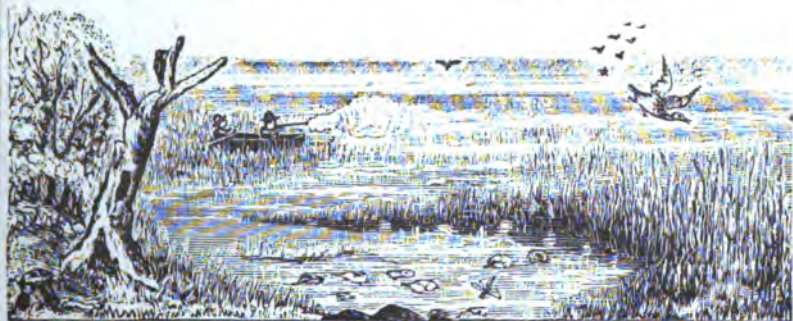
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THE
CANADIAN SPORTSMAN
AND
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A MONTHLY JOURNAL.



MONTREAL, FEBRUARY 15, 1881.

Contents :

	Page.
Answer to Correspondent	9
Salmon and Sea Trout Rivers of Quebec.	9
Trout Rivers and Lakes of Quebec.	9
ENTOMOLOGY.—The Milk Plant and its Parasites.	10
Montreal Branch of the Entomological Society of Ontario.	14
Salt Springs in Lake Ontario.	11
Oological Collection.	11
The Peter Redpath Museum.	14
Ruffed Grouse Shooting.	11
The Black Squirrel.	12
Proper Names.	12
Game in Season—February.	12
Canadian Fishery Leases.	12
Buckland's Museum.	12
Fish and Game Protection Club for Province of Quebec.	12
Correspondence to the Editor.	13
Our Game.—Report on Nomenclature (continued)	15

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THE CANADIAN SPORTSMAN AND NATURALIST.

No. 2.

MONTREAL, FEBRUARY 15th, 1881.

VOL. I.

ANSWER TO CORRESPONDENT.

R. B. S., GRAVENHURST, O.—All the North American deer are supposed to be described. You will find correct information from the Game Nomenclature which we are publishing. The deer you mention may be forms of Caribou or monstrosities. Send us drawings of the horns, which may lead to a determination.

SALMON AND SEA TROUT RIVERS OF QUEBEC.

Passing onward from point to point on the north shore of the St. Lawrence, where *Salmo salar* occur annually, we will, in this instance, make a few remarks on additional localities where the noble fish is taken sometimes abundantly in nets, but scarce in rivers in the immediate vicinity. Omitting the St. Marguerite, Mr. Price's river, a tributary of the Saguenay, which is well known to Canadian and American anglers, we will glance at a narrow river entering the Bay of Esquimaux. A few salmon visit this river. There is a saw-mill near its entrance, and the bay has no depth at low tide. At one time it was considered dangerous for schooners to enter it on account of large boulders, but of late they have been removed by the Government, and it is now a fair harbour for small craft in bad weather. A few hours sail further down, the angler reaches Baie Mille Vaches, a long stretch of sand beach, near the east end of which the Portneuf River enters the St. Lawrence. Although the latter river is only deep for a short distance, it has one pool where salmon and sea trout visit. A saw-mill was in operation at one time above the pool, but the timber is exhausted, and it may now be made a permanent salmon river, by removing the dam to allow the fish to go up to spawn. Near this river, there is a good sea trout fishing place,

called Sault-au-Mouton, where excellent sport may be had in June and July. Now, to reach this place, it will be necessary to take the train from Point Levi to either Riviere-du-Loup or any station between the latter station and Bic. Then hire a boat with a pilot or guide to cross the St. Lawrence. Make for Portneuf River, put up camp, enjoy the scenery, prepare for fishing, sand-flies and mosquitoes.

TROUT RIVERS AND LAKES OF QUEBEC.

The best trout stream north of Montreal is called the Black River. It takes its source from a Lake called *Lac a la Croix*, about ten miles from Mr. Leprohon's house, at the commencement of the colonization road leading to the Mattawan. It is not expensive to reach this gentleman's residence, where accommodation and supplies can be obtained. The river is a day's ride from the village of Joliette. It consists of a series of pools and lakes from the entrance into the Laurentian Mountains, until *Lac Sauvage* is reached, the latter lake being near its source. The following is the Editor's score of Brook Trout taken on the Black River. The fish averaging from a quarter to a half-pound each:—

June 15th, forenoon,	36 lbs.
" " afternoon,	20 "
" 16th, forenoon,	22 lbs. Rod broken.
" " afternoon,	35 lbs.
" 17th, forenoon,	20 lbs.
" " afternoon,	10 lbs.
" 19th, forenoon,	30 lbs.
" " afternoon,	25 lbs.—198 lbs.

Several miles of the river can be fished from its banks, and parts of it may be waded. The upper portions are composed of a series of lakes or ponds all of which teem with silver-scaled trout, but it is necessary to have a canoe or raft to fish from, therefore, it would be well to take an axe and auger; with these a raft can be put together in a short time, as there is plenty of dry wood accessible. Any kind of

artificial fly will answer on the Black River; the hooks need not be larger than No. 5 or 6, and two flies will suffice on a cast. Parties wishing to visit this mountain lake region to camp in June or July will have to take warm clothing, as the nights are generally cold. A description of the lakes and streams springing from the rocky mountains of the Assomption and Black River is new to sportsmen. Both of these rivers drain the great Laurentian lakes north of Montreal. Many gentlemen who spend their holidays in pleasure of this nature, never heard of this grand mountain camping-ground. They generally visit the seaside, where, in many places, good brook trout fishing can not easily be obtained. Sometimes they have to go as far from the coast to brooks and lakes, as it is from Montreal to the Black River.

Entomology.

THE MILK PLANT.

WHY ARE ITS INSECT PARASITES RED AND BLACK IN COLOUR?—BY THE EDITOR.

Mimicry is remarkable in species belonging to almost all Orders of Insects. It is also well defined in some of the reptiles, in the flower-frequenting spiders, and some species of Lepidoptera. With the exception of the common Tree Frog, (*Hyla versicolor*), which has the power of imitating the bark color of the tree it rests on; the spiders belonging to the Genus *Thomisidae*, the bodies of which are imitative of the colors of the flowers in which they hide, little is known of the cause of certain insects that are parasites on plants, and which retain colors almost similar to each other. That the provision of the reptile and spider with this power of mimicry is in order to secure their food, is considered a strategy of nature. The tree frog is an arboreal animal, which can change its color to suit almost any place. The spider, in like manner lies like a wolf imbedded in the flower, preferring, in the neighborhood of Montreal, either white or pink and white,

wherein, with its fore feet erect, it is ready to pounce on any unlucky insect coming within its reach. These instances are understood by the watchful student of nature. What is wished to be inquired into, is the cause of a number of insects occurring evidently as parasites on a single plant, and all the insects having a predominating color, either red or black. This study is certainly interesting, and it has led to these remarks, from the fact that the occurrence have frequently been noticed on the common Milk Weed (*Asclepias*). Why are *all*, and there are quite a number of insects of different Orders, which frequent or feed on the plant during summer, red and black, or entirely red in color? A coleopterous insect (*Tetraopes tetraophthalmus*) is totally red above, with black elytral spots. Another coleopterous beetle, *Labidomera trimaculata*; elytra, red and black. The two latter feed on the plant. An insect of the order Hemiptera, occurs common on the Milk Plant in June. It is blood red in its early stages; indeed on several occasions last year, the above beetles and their larvæ in company with the red Hemipterous bug crowded the plant, and the contrast between the downy green leaves blending with the red and black colours of the insects was what led to this inquiry. Every entomologist knows the butterfly (*Danais archippus*), also red and black, in the imago form, whose caterpillar feeds on the Milk Plant. There are doubtless other parasitic insects which may have been overlooked. When the plant is in flower, it is an excellent one for the entomologist to visit—even at night it attracts a few rare moths. Lastly, it may here be remarked, that a Dipterous, or two-winged fly (*Tachina*)—having a red body, covered with hair, is fond of sucking the flowers in daytime. There are some profound inquiries to be made in relation to the above insects and their connection in regard to color, with the plant as food. The larvæ of the archippus butterfly has no red colour, but the imago has it abundantly. In the transformation of *L. trimaculata*, its lar-

væ has no red. The imago *Tetraopes* is found on the Milk Plant, and its larvæ is said to feed on it. The history of the red Hemipter is well worthy of investigation. In an article, written by me in the *Canadian Entomologist*, some time ago, relative to the food of insects as influencing their colors, am still of opinion that by careful study chemically, of those that feed on the Milk Plant, much of what was then contended for, may prove correct. This is written with a view to induce some of my many entomological friends to look further into the matter. Our columns are open to intelligent thoughts on the subject.

SALT SPRINGS IN LAKE ONTARIO.

In a correspondence which the Editor of this journal has had last August in the *Forest and Stream*, in regard to a salmon called *S. Wilmoti*, a Mr. B. of Grand Falls, New Brunswick, states, that "many reflecting persons" are "of opinion that they, (the salmon) frequent salt springs within Lake Ontario. Can any of our readers give us information regarding this statement? We are anxious to know where *Salmo Salar* goes to when liberated from where it was bred in the hatchery at Newcastle. B. informs us that "this point, however, it is hoped, will be shortly cleared up, as it is expected that facilities for close observation of the habits of these fish will be afforded by the Government. We will watch and see if these observations are made.

ŒOLOGICAL COLLECTION.

Many persons who visited the late Montreal Industrial Exhibition, must have noticed two large show cases which contained a collection of the eggs and nests of North American birds. It was, indeed, one of the most interesting exhibits in the building. Few people are aware of the extraordinary care, labour and expense which the accumulation of a collection of this nature involves. It is the property of a gentleman who has been studying North American

Oology, for years past. He is still adding to it, and doubtless in a few more years, the greater portion of the species inhabiting temperate America, may be obtained. There is more in the study than can be seen at first sight. The classification of our birds is specifically difficult in certain groups, and it is thought a more natural affinity may be attained by a comparison of embryonic form and colour. This is the case with many species, such as Sparrows, Buntings and Finches, whose egg markings, in many instances, blend so similar that it is difficult to separate them, although the birds belong to distinct genera. The same may be said in regard to the warblers which are at present in a mixed condition as to classification.

RUFFLED GROUSE SHOOTING.

The Snipe and Woodcock are generally supposed to be the most difficult of all our game birds to shoot, and the sportsman who can bag his four out of five of these birds usually considers himself able to knock over anything that flies. It requires, however, only a day's sport with the Ruffled Grouse to convince him that he has over-estimated his prowess. Frequenting dense covers, and underwood, rising swiftly with a whirr of wings that sometimes startles the most experienced hunter, hard to hit, hard to kill, it is not to be wondered at that only the most enthusiastic sportsman should take pleasure in their pursuit. To the true lover of sport, however, there is no shooting more exciting, his pleasure is enhanced by the difficulty attending it; and, if after a day's hard tramp, he has succeeded in bagging a few brace, he thinks not of the fatigue which he has undergone, or the miles he has travelled; his endurance and skill have secured their reward; and as he throws down his bag containing the spoils of the chase, a happy smile proclaims the enjoyment of his sport; the pleasure of return with a well-filled bag.

WALLACE.

THE BLACK SQUIRREL.

A black squirrel, in excellent condition, was shot on the farm of J. A. Simpson, Esq., Coteau, on the 13th January. It is said that this animal has not been seen in the neighborhood of the Coteau for years past. Another specimen, the gray variety, was shot on the 6th concession, Roxton Falls, on the 10th of January, by J. I. Newport, Esq., of this city. Although it leaves its hiding place on fine winter days in Western Canada, it is not fond of cold, and it seems strange that it should be abroad when the thermometer was so low.

PROPER NAMES.

"*Capture*.—M. Fraser a attrapé hier une magnifique poule de prairies, sur la côte du Beaver Hall. Il est très rare de voir cet oiseau au Canada à cette saison de l'année. Il disparaît généralement vers le 20 novembre."

The above is from *Le Nouveau Monde*. The bird referred to is the Woodcock, the capture of which we noticed to in our January number. The Prairie Hen (*Cupidonia Cupido*) is a Grouse, and does not occur in this Province.

PROVINCE OF QUEBEC.**GAME IN SEASON—FEBRUARY.**

Ruffed and Spruce Grouse; Ptarmigan; Wild Geese and Wild Ducks.

FISH IN SEASON—FEBRUARY.

Whitefish, Salmon, Trout, Lake Trout, Brook Trout, Bass, Doré, Maskilongé.

CANADIAN FISHERY LEASES.

A numerously signed petition by the inhabitants residing on the banks of the Rivers Restigouche and Metapedia has been presented to the Minister of Fisheries through Mr Beauchêne, M.P. for Bonaventure. The petition sets forth that at Confederation, the Federal Government assumed the right of leasing the inland rivers for angling. This assumption on the part of the Government, carrying with it many hardships to be borne by the settlers,

has been declared by the Courts of Justice to be illegal; the inhabitants therefore petition the Government not to renew the leases which have expired with 1880, nor to issue new ones. They point out that they have waited patiently for justice at the hands of the Department of Fisheries: at the same time they insist on their legal rights and refuse to acknowledge (as the law is at present) the leases granted by the Federal Government.

BUCKLAND'S MUSEUM.

The late Mr. Francis T. Buckland, Editor of *Land and Water*, has bequeathed his valuable Museum of Economic Fish Culture to England, and on the decease of Mrs. Buckland, a sum of £5,000 will revert to the nation to be applied for the purpose of founding a Professorship of Economic Pisciculture in connection with the Buckland Museum, and the Science and Art Department at South Kensington, London.

FISH AND GAME PROTECTION CLUB FOR THE PROVINCE OF QUEBEC.

This Club held their annual meeting on Saturday, January 15, R. H. Kilby, Esq., President.

The following report was read by the Acting Secretary, J. H. Mathews, Esq.:

In March and April several seizures of game were made and the offenders fined; the large quantity of game thus confiscated (over a ton weight) was distributed among the charitable institutions of the city. Seizures were also made from three other parties. Through information given by the Club a great number of nets were confiscated during the past summer, principally round Vandreuil, where no less than 17 were captured. During the last session of the Quebec Parliament, your Committee, in co-operation with the Sherbrooke Club, made a vigorous attempt to have the present Game Law so amended as to do away with the spring shooting of ducks and other wild fowl which come to breed on our rivers and lakes, and a committee was named, consisting of Judge Courso, M.P., E. Monk and R. Stephens, to proceed to Quebec to watch our interests. Unfortunately, the amendment was not brought up until the last day of the session, when most

of the members supporting it had left, consequently the matter will have to be brought up again this year. At a meeting held November 24th, it was decided to get up a case as to snaring partridge, and at the next meeting the acting secretary stated that a case had been brought before the Police Magistrate, but that it had been dismissed, as his Honor considered there was some doubt as to the accused being able to tell whether the partridge had been snared or not. Your committee would here draw the attention of the incoming committee to the fact that over two-thirds of the partridge offered for sale in this city are taken by snares, many of them being decapitated to prevent detection. Mr. Euclid Roy, advocate, was thanked for his gratuitous service.

The Treasurer, Mr. W. H. Rintoul, then read his report, which shows that the Society is in a more prosperous state than it has been in for several years. The income for the past year was \$262, and the expenditure \$244.61, showing a surplus of income over expenditure of \$17.39.

The Club numbers 120 members.

The following are the officers for the ensuing year:—

J. C. Wilson, Esq., President; E. C. Monk, Esq., Vice-President; W. H. Rintoul, Esq., Treasurer; J. H. Mathews, Esq., Secretary. Committee.—R. H. Kilby, Esq., H. R. Ives, Esq., J. H. Stearns, Esq., R. A. Alloway, Esq., Geo. U. Ahern, Esq., J. J. Redpath, Esq., T. J. Brady, Esq., E. B. Goodacre, Esq., T. W. Goodwin, Esq., A. N. Shewan, Esq., J. Johnston, jr., Esq., L. A. Boyer, Esq., J. B. A. Mongenais, Esq., T. R. Hall, Esq., J. B. Robertson, Esq.

CORRESPONDENCE.

To the Editor of the CANADIAN SPORTSMAN AND NATURALIST.

DEAR SIR,—On my arrival in Montreal a few days ago, I was delighted to see that you and a few other enthusiastic sportsmen had decided to supply a want long felt in Canada, viz: a paper devoted to the interests of that class of gentlemen who shoot and fish for true sport, and I feel sure that success will attend your efforts.

I must say I felt flattered when I received your request to contribute something, and only wish I had your facile pen to interest your readers. My summer of 1880 was spent in the N. W. T. of the Dominion. The 20th July last found me in the Duck or Riding Mountains, at the head waters of Bird's Tail Creek, about 51° N., and on the 101st meridian.

These mountains are covered with a dense forest of tall poplars and birch, and thick underbrush of hazel and raspberry, making it impossible to get through without cutting a trail in advance.—This 20th July was a very hot day. We had started at 6 a.m. with a train of thirteen heavily loaded carts, and by 11 a.m. had made about three miles, when a very peculiar noise saluted our ears. Knowing this forest to be full of bears, we at once came to the conclusion that we were in the vicinity of a family; sisters, cousins and aunts, of these affectionate creatures. The train was ordered to halt while the chief of the party and myself went forward to prospect. As we advanced the noise grew louder and louder, till we called a council of two, to decide what had better be done; face the enemy or draw on our reserves and advance in full force. While deliberating the chief happened to cast his eyes heavenwards and the mystery was explained—we had struck a heronry—hundreds of these birds were passing to and fro, and on going forward a hundred yards or so, we found the tops of the poplars covered with their nests, the young birds full grown but not able to fly, perched on the highest branches of the trees. Here in the heart of a dense forest, probably never trodden by man before, were thousands of nests of our common blue heron (*Ardea herodias* Linn). We cut down several trees and captured the young, which were cooked and eaten by some of our men with relish, probably because it was the first fresh food for three months. The nests were made of the small dead branches of the poplar and were placed as near the tops of the trees as possible. I kept two of the young birds alive for a few days, when becoming able to fly they took their departure. These mountains are full of small ponds and bottomless muskegs which swarm with lizards and small fish on which the herons feed, and on getting to an open space near the heronry we could see the old birds coming and going in every direction. Those coming home were stuffed to the bill with food for their young, making them present a very ungainly figure, as they lazily flapped their way toward the woods. On pushing our way through this mountain forest we discovered three good sized lakes about one half a mile wide and from one to two miles in length each. We tried them for fish, but only caught a few common chub. In your next issue I will try and give you some account of the game birds of the Little Saskatchewan and Bird's Tail Creek Regions.

Yours truly,

BIRD'S TAIL.

Montreal, Jan. 31, 1881.

THE GREAT NORTHERN SHRIKE, &c.

SIR,—With reference to an article that appears in your primary number, page 5, I beg to say that a male Shrike, (*Collyrio borealis*) was shot in a private garden in this town on the 14th of the current month. It had probably been attracted by the numerous English sparrows that now infest our streets, several of which it had killed before it was killed itself. For these sparrows, however, notwithstanding old country associations, I entertain no friendly feeling, inasmuch as they drive away our own native birds, Blue Birds, &c. And yet one cannot but admire their indomitable pluck. No severity of weather daunts them. During the exceptionally cold winter we are experiencing, with the thermometer indicating 18° below 0, and on some days with the mercury never reaching zero, they hop about with as much liveliness and self conceit as if they were "at home." Some other importations of *Fauna* and *Flora* into the Colonies from England are anything but desirable, e.g. the Rabbit in Australia, and the Scotch Thistle in America. A fine specimen of the Long-tailed duck, (*Heralda glacialis*), was shot on one of our back lakes last November.

VINCENT CLEMENTI.

Peterboro', Jan. 22, 1881.

The Long-tailed Duck occur abundantly in the Niagara River and Lake Ontario in winter and spring, in fact, it is the most common wild duck frequenting the Canadian Lakes. It is a pretty duck, but not at all palatable, for it is neither "fish, flesh nor good red-herring, although partaking largely of the nature of all these, being exclusively a fish-feeder."—Ed.

SWIVEL OR PUNT GUNS.

SIR,—I am glad to observe that a correspondent over the signature "Wallace," in your first number directs attention to the "wholesale destruction of wild ducks on Lake St. Francis, by American pot-hunters by means of swivel guns." Such guns, or rather their use, for the purpose of killing wild fowl, is contrary to law in the Province of Ontario, and any person using them to kill game subjects himself to the penalty of twenty-five dollars for each offence. There surely must be sportsmen of the legitimate class living in the neighborhood of Lake St. Francis, who will take some interest in preventing such a flagrant breach of the

Game Act. We have no objections to see our brother sportsmen from across the border, whenever they chose to come to Canada, to enjoy themselves; but pot-hunters who kill for the market are always objectionable; and if they cannot, as they ought, be prevented from killing game, they should at least be compelled to do so according to law. I hope that no such illegal and unsportsmanlike modes of killing ducks, by swivel or punt guns of any kind will be allowed during the coming season.

Yours truly,

HAMMERLESS GREENER.

Ottawa, Jan. 27, 1881.

THE REDPATH MUSEUM.

The building to be hereafter known as the Peter Redpath Museum, in connection with McGill University, we are pleased to state, is progressing, and after the removal of the Geological Survey's Cabinets, the citizens of Montreal may have one good collection to refer to. The present room is too small to contain the yearly increasing material, which is either purchased or donated to the University. Dr. Dawson deserves the thanks of the public for his efforts in procuring the specimens and advancing the this educational department.

MONTREAL BRANCH ENTOMOLOGICAL SOCIETY.

The eightieth meeting of this Branch of the Entomological Society of Ontario, was held on the 8th inst., at the residence of the Secretary, Mr. G. H. Bowles. Mr. Caulfield read a paper on the Coleoptera of the Island of Montreal. A number of insect dissections were also examined by the microscope.

A successful reunion of the Fish and Game Protection Club, of the Province of Quebec, was held at the St. Lawrence Hall on the evening of the 20th January. The menu, very properly, was largely composed of fish and game, and was served in a manner highly creditable to Mr. Hogan, the proprietor of the Hall.

OUR GAME.

REPORT ON NOMENCLATURE.—*Continued.*

Cariacus—"Horns smaller, curving forward, the first spur short, curving upward; tail long; hoofs rather elongate; size smaller."

Now, in all conscience, what earthly object is achieved in all this but a general muddle? A sub-family is erected on the ground that certain forms have deciduous horns, or that they may want these ornaments, forgetting also that the so-called non-deciduous horns are deciduous at some time of their existence. This is certainly factitious, so we may discard the sub-family *Cervinæ*, and thereby benefit true science.

Now, look at the genera: *Alces* and *Rangifer* are separated namely on the ground of a few hairs at the tip of the nose, which are by no means constant, and the possession of horns by the females of the latter. To follow the rule, the females might constitute a genera by themselves, as their horns are rarely palmate. Again, the presence or absence of horns is by no means a generic characteristic, scarcely even a specific one, as it is now known that there is a tendency among all these genera to horns in the female. *Cervus* and *Rangifer* are separated on the grounds of want of marked palmation in the former, and absence of antlers in the female sex. *Cariacus* is divided on the basis of a rather more elongated hoof, the angle of curvature in the antlers, and—horror of horrors—a faint difference in tail.

Now, gentlemen, here is not evidence sufficient to found a genera, though of undoubted value in the distinction of species. Formerly, great stress was laid upon the supposed fact that the young of the moose and caribou never exhibited the spotted coat, but the falsity of this has been shown by the researches of Capt. Campbell Hardy. This leaves no ground whatever for the puerile classification and nomenclature exhibited, and we may with propriety return to *Cervus* as the generic title of all our deer; there is no mistaking *Cervus Alces* for the elk or moose deer, *Cervus Rangifer* for the reindeer, *Cervus Canadensis* for the

wapiti, and *Cervus Virginianus* for our common species. Judge Caton has already recognized this fact, and took the initiative in his work on the "Antelope and Deer of North America."

Even to erect a new species is a grave mistake if it naturally coincides with any other. We have at present *Cervus (Cariacus) Cucurus* and *Cervus Mexicana*, which are but the common Virginia species slightly modified by range, climate, differences in food, etc. It is a well known rule of classification, but little recognized by the pseudo-scientists of the day—that to give birth to a new species—letting alone genera—it is necessary that characteristics should be observed that are prominent, constant and uniform in every individual, and wanting in all other individuals of the same class, and that cannot by any possibility be attributed to variation in habitat, food, climatic causes, etc. Let this, then, obtain with us as a body and as individuals.

Of birds, the same may be said in a general way as of mammals. But this report is already too long to admit of reviewing their classification as thoroughly as has just been done, following step by step down to well-known objects; such would be taxing an already over-taxed patience. Let us commence at once, therefore, with our grouse.

Under our present absurd method of classification and nomenclature, America possesses no less than six genera of grouse, exclusive of the ptarmigan. These genera are divided into twelve species, or six species and six varieties of species, viz: the spruce grouse and Franklin variety of the same, the dusky grouse, and a darker variety, the pinnated grouse and a variety, two forms of sharp tail, one sage, and three ruffled grouse.

The following table exhibits the different genera and the characteristics on which each is supposed to be based; the genus *Dendragapus* has been denied by one author, and relegated to *canace*, as he evidently felt that its discoverer was poaching on his preserves, but its existence is equally valid with those at present accepted.

GENERA AND CHARACTERISTICS OF AMERICAN GROUSE.

FEATURES.	GENUS.	GENUS.	GENUS.	GENUS.	GENUS.	GENUS.
	TETRAO.	CANACE.	DENDRAGAPUS.	CYRIDONIA.	PEDICORCES.	CENTROCORCES.
TAIL.....	18 feathers; 2-3 length of wing.	16 feathers; about equal to wing in length.	20 feathers; 2-3 length of wing; sometimes more.	18 feathers; one-half length of wing.	18 feathers; one-half length of wing.	20 feathers; about equal to wing in length.
TARSUS.....	Feathered to the toes.	Do.	Do.	Do.	Do.	Do.
Toes.....	Middle and claw longer than tarsus.	Middle, and claw as long or longer than tarsus.	Do.	Middle toe and claw longer than tarsus.	Do.	Do.
HEAD.....	Indications of crest; pectinated processes over the eyes.	No crest; pectinated processes over the eyes.	No positive crest; pectinated processes over the eyes.	No positive crest, though sometimes apparent. Pectinated processes over the eyes.	Faint indications of crest. Pectinated processes over the eyes.	No positive crest; pectinated processes over the eyes.
NECK.....	No unusual feathers on neck; nor true gular sac.	No unusual feathers on neck. No gular sacs.	Gular sacs present.	Plumes on neck; gular sacs present.	Slight indications of elongated feathers on neck. No gular sacs.	Stiffened feathers on neck; gular sacs wanting.
BILL.....	Lengthened.	Slender.	Medium.	Medium.	Slightly stouter than cupidonina, yet difference not always appreciable.	Medium.
Indications wanting in all other genera.....	None.	Two less feathers in tail.	None.	None.	None.	Stiffened feathers instead of pectinated processes over eyes. Well developed ruff.

(To be continued).

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THE CANADIAN SPORTSMAN AND NATURALIST.

No. 5.

MONTREAL, MAY 14th, 1881.

VOL. I.

THE GRAND ROMAINE.

This beautiful river enters the sea about nine miles east of Mingan. It is considered one of the best for angling. The salmon are generally of large size, said to be of extraordinary strength, and give excellent sport; indeed, one cannot easily doubt this statement when he visits the place and views the magnificent falls, just above the angling pools, and opposite the camping-ground. He may naturally ask does salmon leap this mighty torrent of water? No, dear Sir, although the salmon of this river are remarkable for their size and beautiful form, they cannot reach the spawning-grounds by attempting to leap such a perpendicular fall of water. Nature has provided another entrance for the fish, a short distance east of the falls. It is therefore evident that the habits of salmon are similar to the sea trout, which are known to remain for many days feeding in the estuary, gradually becoming accustomed to the river water before they finally depart for the purpose of propagation. In like manner, salmon leaving the salt water make for the pools at the base of the Romaine falls, where they remain a short time making vain efforts to go farther, but finding a barrier they again turn seaward discovering the east entrance where they enter and reach, (after many difficulties) their spawning-grounds. While we were at Mingan in 1868, the mistake of salmon missing their native river, was illustrated by the fact that the Romaine form of fish was caught in nets placed near the Mingan. It must be remembered that although there is no structural difference in *Salmo salar*, there is an evident change in the exterior form of the fish which is remarkable and moreover applicable to the river to which the salmon belongs, and the man who net-fished the Mingan at that time, could, with confidence say, "Mr. Couper,

this salmon which I have just taken from my net has made a mistake, it has passed its own river." Capt. LeMarquand, please explain. "You see, sir, that the shape of the fish is totally different from Mingan salmon; its form is deeper; it is more bulky, and the head is not shaped like any salmon entering the Mingan. This we have ascertained through long experience; we can pick out every fish that makes this mistake." In *Lovell's Gazetteer*, the Romaine is described as a large river of Quebec; falls into the north shore of the Gulf of St. Lawrence. It extends north and south many hundred miles, and has some fine falls. One hundred miles from its mouth, there is a natural bridge, and three hundred miles farther magnificent falls, said to be equal to those of Niagara." We have had the pleasure of entering the Romaine in a canoe, as far as the pool at the base of the fall on the north-west branch, about ten miles inland, where this portion of the river becomes narrow, descending from primitive rocky gulches, showing evidence of the difficulty salmon has to contend with in reaching the spring tributaries which make the river proper. If the water happens to be low, the fish must remain in the pools until rain occurs further north to add to the bulk of the stream. Should this not take place, many fish which have reached thus far must of necessity return to salt water before winter sets in. In our opinion the Fishery Department should take away this obstacle to salmon passage on the Romaine. It would cost little to make proper and permanent fish-leaps through these almost perpendicular falls, besides it would make the river more valuable, and increase the number of salmon. Several North-Shore St. Lawrence rivers are similarly situated. For instance, the Mingan; it also could be improved by making a more easy passage for salmon over its rocky fall of water.

Microscopical.

The Microscope is a delightful source of instruction, especially when in the hands of an expert. The *minutæ* of this world are through it clearly presented to our view. When the instrument is properly worked by an intelligent head of a family, the information and pleasure derived from it is unbounded. Having clever microscopists in Canada, it is our wish to encourage their investigations, and we therefore solicit communications regarding new discoveries. Mr. Murphy's microscopical investigations on the structure of the mosquito's proboscis should induce others to follow correct manipulation. We cannot publish what has been microscopically examined in a hurry; an object must be repeatedly and thoroughly tested, and its structure properly defined by frequent examinations in order to claim our attention. Furthermore, in describing minute forms, it will be necessary to apply proper names to their several parts. It is not correct to call the proboscis of a Dipterous fly (the mosquito) a sting, as the latter organ does not occur in the two-winged flies. Bees and wasps (four-winged flies) are stinging insects.

THE MOSQUITO'S PROBOSCIS.

It is an interesting question how a creature as small as the mosquito, and so very light that the slightest breeze will blow him away, can hold on to his prey with sufficient tenacity to force through a hard epidermis, and into solid flesh, his very delicate and perfect instruments. A careful examination of his organs, and repeated observation of the insect while feeding, by Mr. Edward Murphy of Montreal, (who has dissected and mounted a large number of these little creatures, and has paid particular attention to their habits) have brought to light the following particulars, which are copied from his extensive notes on the subject.

As in all the "blood-sucking" insects there is a wonderful modification of the mandibulate

mouth. A prolongation of the *labium* forms a proboscis, covered with minute scales; having a sort of muscular contraction a short distance from the point, which not only holds all the contained organs into a compact body for insertion, but also forms a sort of "cleaning" organ, through which they can be drawn. When the instruments are inserted into the flesh, this proboscis is pushed back, bending towards the top, at an angle more or less acute, and having something the appearance of a leg with a bent joint.

The mandibles have been modified into a pair of beautiful saws, whose sharp teeth, generally ten in number, small at the point of the instrument, and increasing in size towards the mouth, and *set backwards*, not only act as cutting tools, but from their barbed shape, give the creature the "purchase" necessary to hold him to his prey. A careful observation of the insect whilst feeding, shows him *pulling* the saw on one side as he *pushes* it on the other. The side he *pulls* is the side that cuts. Thus the action that increases the depth and size of the wound, also gives him the necessary "purchase" to enable him to push in the opposite saw.

Between these saws and the central tube the *maxillæ* are modified into a pair of irritators: possibly used also to prevent any solid matter of too large dimensions entering the tube.

The tube, a modification of the tongue, is horny in its structure, sharp pointed and solid at the end; so that it may be pressed firmly against the bottom of the wound, without risk of being stopped up: the blood flowing through a hole like the eye of a needle, which *passes* through the tube, at a distance from the point equal to about the diameter of the tube.

MONTREAL BRANCH ENTOMOLOGICAL SOCIETY OF ONTARIO.

The Eighty-second meeting of this Society was held on the 12th April last, at the residence of H. H. Lyman, Esquire. Three gentlemen were proposed for membership, and some interesting notes of the early appearance of insects

this year were placed on record. Mr. Lyman laid before the meeting a "list of the Lepidoptera taken by Mr. Robert Bell in the Northwest Territory," which was noteworthy as showing the extensive distribution of some of our Canadian butterflies; and some time was very agreeably spent in examining his copy of "Abbott & Smith's Insects of Georgia," a standard work, and very finely illustrated.

Correspondence.

To the Editor of the SPORTSMAN AND NATURALIST

DEAR SIR,—I was astonished this week to see it stated in one of our city papers that one thousand brace of black duck had been sold a few days ago on the Montreal market. If this item of news is correct, it indicates a most lamentable state of things, calling loudly upon all sportsmen, and all others interested in the proper and reasonable preservation of game—and what good citizen is not?—to use their most strenuous and immediate efforts for the effectual prevention—as far as legislation can do so—of the killing of black duck, mallard, grey duck, and wood-duck in the Spring. With the exception of teal, all the above-enumerated species are protected in Ontario for the period between the first of January and the fifteenth of August. The law in the sister Province should be the same. Now that the Quebec Legislature is in session, I hope something will be done to prevent the suicidal policy of slaughtering and exposing for sale such splendid birds as black duck in the breeding season, too, when the females are laying their eggs. Admitting that amongst the two thousand black duck reported to have been sold in Montreal, there were one thousand females, and that each of such females, if unmolested by the worst enemy of game, the market poacher, would be able to bring up to maturity, at the very least, five of her brood, and many rear double this number, instead of two thousand, we have actually six thousand black duck imprudently and wantonly destroyed in the breeding season. This kind of work should be tolerated no longer in a civilized country. Even were there no law to control him, no civilized white man ought to be guilty of killing game in the breeding season. This kind of miserable work should be left to the Indian

who will soon have the plains to himself for anything he ever did to protect the game of the country. Trusting that during the present session of the Quebec Legislature, the legitimate sportsmen of your Province will be able to accomplish something towards assimilating the Game Act of Quebec with that of Ontario, more particularly as respects deer, wildfowl, snipe, woodcock and ruffed grouse.

I am, yours truly,

WILLIAM P. LETT.

Ottawa, April 29th, 1881.

THE ROBIN.—*Turdus migratorius*.

MR. EDITOR,—It gave me much pleasure to read the statements by my friend Mr. Saunders of London, in regard to our insectivorous birds. I am glad he has made these especial published observations, as they agree very closely with the same variety of scientific remarks made by Mr. Riley of Missouri. Nevertheless, much may be said in direct contradiction and with equal truth. As to Mr. Saunders' remark that *Turdus migratorius* is a very mischievous bird, I cannot agree, as I know to the contrary. Nevertheless, this is not the idea I wish to introduce. Mr. Editor, did you ever eat a robin? If not, you have a great pleasure ahead. I have eaten many, and am only sorry that I cannot procure them all the time. They are really a delicate morsel at breakfast, and well worth the trial. I do not care to shoot them in Spring, but after the first of August, when Woodcock come in, I let them pass after killing sufficient for a dish. Try some and then give your opinion. Thousands are sold in New York, and other American cities, for a few cents each. If I remember rightly, about 10 cents a pair, is what I paid for them in New York. Before cooking, I should recommend them to be plucked and drawn, as the feathers and the "innards" are as well removed. Then get them nicely fried in butter for ten minutes. Serve on toast; and any one of reasonable desires must be content. I think it strange that this bird, as well as many species of snipe and plover, are not included in the game law, as they are well worthy of protection. I moot this point, and being an enthusiastic sportsman, I sincerely wish it would be attended to. You mention a delegation to go to Quebec about the Game Act. Would it not be as well to consider the other birds that could be easily included, and that sportsmen seldom allow to pass without bagging.

J. H. GARNIER.

Lucknow, Ont.

WHOLESALE SLAUGHTER OF WILD DUCKS.

SIR,—In reply to "Hammerless Greener's" letter published in your February number, I beg to say there are several legitimate sportsmen living in the neighborhood of Lake St. Francis, and that Soulanges County has just sent a petition to the Commissioner of Crown Lands for Quebec, signed by J. P. Lantier, M.P., W. Duckett, M.P.P., and seventy three of the most influential people in the county, praying that the wholesale slaughter of wild ducks by American "pot-hunters" be put a stop to. Where the greatest number are killed is not in the Province of Quebec; it is a few miles above the line, at Currie's Creek, in the County of Glengarry: which county, I hope, will also send in a petition to the Commissioner of Crown Lands for Ontario.

Yours faithfully,
St. Polycarpe, Q., } T. W. W. G.
April 26, '81.

SIR,—The Fish and Game Protection Club have an advertisement in your Journal giving the names of Office-bearers, &c., and intimating that notice of infractions of laws for the Protection of Fish and Game should be sent to the Secretary. Your correspondent E. D. W. has not taken this course; had he notified the Secretary of illegal netting which he alleges takes place at Beauharnois, giving date and names of the offenders and witnesses, the case would have been taken up at once. It is impossible for the Club to keep men at every spot where fish may be illegally taken: the most they can do is to prosecute such offenders as may be reported to them, with sufficient information as to witnesses, &c., to secure a conviction. They invite E. D. W. to send his complaints direct in the future to the
SECRETARY.

SIR,—Having tried long-range shooting at my "Force gauge" with two 12-bore guns, I send you the result, thinking it might be of interest to your readers:—

12-BORE.—WEIGHT, 7½ LBS.

Charge 3½ drams powder, 1½ oz. No. 4 shot, (162 pellets to the ounce.)

Distance from gauge.	Pellets on gauge 5 in. diameter.	Force per Pellet.	Final velocity ft. per sec.	Penetration. Number of sheets.
40 yds.	4	3.60	567	27
50 "	2	2.90	169	17
60 "	1	2.17	350	10
70 "	Not fired at this range.			

12-BORE.—WEIGHT, 8 LBS. 10 oz.

Charge 3½ drams powder, 1½ oz. No. 4 shot, (172 pellets to the ounce.)

40 "	8	4.03	653	35
50 "	4	3.46	560	26
60 "	3	2.86	463	17
70 "	2	2.00	324	9

Same gun with 3½ drams of powder, 1½ oz. of No 7 shot (320 pellets to the ounce.)

40 "	7	1.60	519	19
50 "	5	1.23	393	11
60 "	3	0.76	243	6

I merely send the trial with No. 7 shot to show how rapidly the small pellets lose their velocity.

I am about to make a trial of different kinds of powder, viz., English, Canadian and American; if you think it will be of sufficient interest I will send you a report of the result.

Yours truly,
12-BORE GREENER.

Lachine.

SIR,—In reply to your query as to how far inland Shad have been known to go? I will state for the benefit of your readers, that fine specimens of these fish have been taken as far up the Ottawa as the "Long Sault." Never, to my knowledge, beyond this point, as the wild stretch of rapids known by that name interpose a barrier to further ascent. Consequently the fish assemble in shoals, in an inlet, on the Ontario shore, and a rich season of sport is annually enjoyed by the "few" who know of this piscatorial eldorado.

J. D. F.

Montreal, 5th April, 1881.

NOTE,—Since the receipt of the above we have ascertained that Shad visit Lake Ontario. Our correspondent's letter is interesting in regard to the farthest point reached by the fish in the Ottawa river. How they reach the "Long Sault," at the foot of Lake Temiscamingue, 233 miles above the city of Ottawa, is a matter of which we are anxious to have more information. Are there two "Long Saults" on the Ottawa? We make this enquiry because our correspondent speaks of "the Ontario Shore," leaving one to believe that a "Long Sault" occurs on the Quebec side of the river.—Ed.

Herpetology.

LIST OF REPTILIA OF ONTARIO.

To Reptiles that I have not seen, or those reported to me on good authority, I have affixed a mark of interrogation (?). All the others I have recognized, and they are in my cabinet. I do not consider this list by any means perfect, and other forms will doubtless be added by scientific research. I solicit exchange from Herpetologists in the Dominion, and neighboring States of America, as I have a fine lot of Ontario duplicates in the best condition for this purpose. I wish to obtain reptilia, of all classes, from the Province of Quebec, as the difference of climate is of great importance in regard to colouration. This is remarkable in the genus *Eutania*; whose geographical distribution, with other causes, seem to exert an extraordinary influence in regard to tints and colouration, not alone in Canada, but wherever they occur. There is, perhaps, no branch of natural history less studied in a scientific manner than Herpetology. Here we have an enormous field for research, and scientific enquiry, and Ontario seems as rich in species and genera as any other country of similar extent.

I.—TESTUDINATA.

Family EMYDIDÆ.

- 1—*Chelopus insculptus*. Wood Tortoise. Common.
- 2—*Nanemys guttatus*. Speckled Tortoise. Common.
- 3—*Emys meleagris*. Blanding's Tortoise. Very rare. One specimen captured on Lake St. Clair, by Mr. Buck. Now in my cabinet.
- 4—*Chrysemys picta*. Painted Turtle. Common along the southern shore of Lake Ontario, and in every pond to the south. The most handsome turtle.
- 5—*P. var. marginata*. I have a variety that approaches that described by Jordan.
- 6—*Malacoclemys geographicus*. Map Turtle.

7—*M. pseudo-geographicus*. This is merely a variety, noticeable in the carapace, and seems to be a distinction without a difference.

8—*Aromochelys odoratus*. Musk Turtle. Stink pot; found in Lakes Erie, and St. Clair; rare.

9—*Chelydra serpentina*. Snapping Turtle. Found throughout Ontario. Used for making soup, and in some localities much sought after for this purpose.

10—*Aspionectes spinifer*. Common Soft-shell Turtle. Lakes Erie and St. Clair, scarce; sometimes taken on hooks. Considered a delicacy. One was taken some years ago, in the Ottawa River.—Ed., rare.

11—*Amyda mutica* (?) Leathery Turtle. Although I never saw this species, yet there is no doubt that it exists as frequently as the preceding in Lakes Erie and St. Clair.

II.—LACERTILIA.

Family SCINCIDÆ.

- 12—*Eumeces fasciatus*. Blue tailed Skink.
- 13—*E. septentrionalis*. Northern Skink.
- 14—*E. anthracinus*. Coal Skink. I captured these in Tilberly township, Co. Kent. They may be considered the same species; the young being the darkest. Specimens I possess from North Carolina of *E. anthracinus*, and the others are not distinguishable from my specimens from Tilberly.

III.—OPHIDIA.

Family COLUBRIDÆ.

- 15—*Heterodon platyrhinus*, var. *niger*. Hog-nosed Snake. Blowing viper. Puff-adder. Captured near Toronto by Prof. Montgomery. A well marked specimen, though small; also reported near Port Hope and other places.
- 16—*Nerodia sipedon*. Water Snake. Water Adder. Black Water Snake; common.
- 17—*N. erythrogaster*. Red-billed Water-snake. This is a scarce species. Lake St. Clair.
- 18—*N. niger*. Black Water Adder, B. & G. I deem it to be the male of the *sipedon*, and it is now generally rejected as a species.
- 19—*Regina rigida*. Stiff Snake. Rare. Captured by Mr. Buck, at Mud creek, Lake St. Clair.

- 20—*R. leberis* (?) Leather Snake. Reported by several parties, and although I never saw a Canadian specimen, yet it has been identified by Mr. Smith, of Ann Arbor, as being in Michigan. Reports most probably correct.
- 21—*Storeria occipito-maculata*. Red-bellied Snake. Not very rare. Captured in Kent, Bruce and Huron counties, and reported from Owen Sound.
- 22—*S. DeKayi*. Little Brown Snake. Found all over the western portions of Ontario.
- 23—*Eutania saurita*. Ribbon Snake. I captured one twenty-two inches long in Bruce county; the only Canadian specimen so far examined by me.
- 24—*E. radix*. Hoy's Garter Snake. I captured several young specimens on St. Clair Flats.
- 25—*E. sirtalis*. Garter Snake. This species is considered the typical Garter Snake. I got specimens in Dover township, but never captured it farther north. Not very common.
- 26—*E. dorsalis*. Striped Garter Snake. The best known variety; everywhere abundant. The best marked specimens I have yet seen were procured near Toronto by Mr. W. Brodie.
- 27—*E. ordinata*. A variety with square spots on the sides, seemingly the young of *dorsalis*.
- 28—*E. ordenoides*.
29—*E. parietalis*.
30—*E. vagrans*.
31—*E. elegans*. } Varieties with more or less red markings on the sides. Generally found in marshes or low lands.
- I have captured all sorts of gradings and shadings of coloured specimens around Lake St. Clair. I have also received a few well marked *parietalis* from Mr. John McMillan, Magnetewan, Muskoka.
- 32—*E. Pickeringii*. I have one or two specimens from Mitchell's Bay, Co. Kent, that approach closely to this species or variety, as far as blackness of colour is concerned.
- 33—*E. obscura*. A variety without dorsal stripes. Scarcely admissable even as a variety. The side stripes are generally very obscure.
- 34—*Bascantium constrictor* (?). Black Snake. Gananoque. I have not as yet seen or procured one, but doubtless it exists there among the rocks.
- 35—*Scotophis vulpinus*. Fox Snake. Kent Co. I saw one which measured 7 feet 11 inches, captured by Mr. C. Dusten, and I have one 6 feet 3 inches, taken by Mr. Buck, of Mud creek. Not common. This is the largest and most powerful of our Canadian snakes, at the same time, one of the most innocent, harmless and timid.
- 36—*Cyclophis vernalis*. Grass Snake, Green Snake, Spring or Summer Snake, &c. A well known and beautiful little creature.
- 37—*Diadophis punctatus*. Ring-necked Snake. Not rare in Huron and Bruce counties in damp woods.
- 38—*D. punctatus* var. *amabilis*. I have such a specimen which seems to be the young of the last (*D. punctatus*) and admit it in deference to Mr. Cope, though doubtful of it being worth consideration.
- 39—*Ophibolus doliatius* var. *triangulus*. Milk Snake, Chicken Snake, House Snake, Chain Snake, &c. A well-known species.

Family CROTALIDÆ.

- 40—*Crotalus horridus*. Banded Rattlesnake. Rapidly becoming extinct. I saw one killed on the mountain a few miles east of Hamilton in 1859, and one in 1873, captured not far from Niagara. The measured about three feet each.
- 41—*Crotalophorus tergemina*. Massasauga. Prairie Rattlesnake. I saw the decaying remains of one in Tilberry marsh. The rattles were gone, but having no means of carriage, had reluctantly to leave it. Not rare formerly along Lake Erie, although now exceedingly scarce.

IV. BATRACHIA.

ANURA (Family Tailless Batrachians)

RANIDÆ.

- 42—*Rana helecina*. Leopard Frog. Everywhere.
- 43—*R. pulustris*. Pickerel or yellow-legged frog. Common.
- 44—*R. clamitans*. Green Frog. Common.
- 45—*R.* var. *cæruleus*. I introduce this as a local variety. I captured several with a deep indigo head, but now changing in alcohol to a dark greenish brown.
- 46—*R. Catesbeyana*. Bull Frog. Common.

47—*R. var. rufus*. I introduce this as it is a larger variety; copper brown with no trace of green on the body or head; has a hoarser voice, and keeps more in deep marshes. I obtained specimens on St. Clair Flats and in Bruce county. This variety is well marked.

48—*R. sylvatica*. Wood Frog. I emphatically deny that this species has any connection with the European *R. temporaria* and it is not a variety but a totally distinct species. On comparing it with European specimens in my Cabinet there is nothing whatever in common, and their life history is entirely different.

49—*R. sylvatica* var. *Cantabrigensis*. Specimens I have from Massachusetts, Michigan, &c., differ little from Canadian. Rare.

50—*Pelobates Americanus*. The same as *R. circulosa*, &c. Hoosier Frog. It is not a true *Rana*, nor can I admit it as such at present.

51—*Hyla versicolor*. Common Tree-toad. Common. South. Disappearing gradually northward.

52—*H. Andersonii*. I have found half-grown, and nearly adult *H. versicolor*, almost pure green, with a chocolate brown band obscuring the eye. Generally found among green herbage, and difficult to observe.

53—*H. Pickeringii*. Pickering's Tree-toad. One of the earliest frogs to croak.

54—*Acris Gryllus* var. *crepitans*. Cricket Frog. The most noisy of frogs for its size. Common.

55—*A. gryllus* var. *gryllus*. A variety here of which I have two specimens I can only relegate to this. Taken near Lucknow, Co. Bruce, May 23, 1879.

56—*Bufo lentiginosus* var. *Americanus*. Toad. Common. Very useful to destroy caterpillars and insects.

57—*B. lentiginosus* var. *niger*. I have a deep black coloured variety. Young generally blacker.

URODELA—(Tailed Batrachians).

PLEURODELIDÆ.

58—*Diemyctylus viridescens*. Spotted Triton. Newt, &c. Common.

59—*D. mineatus*. Red Elf. Scarce.

60—*Desmognatus niger*. Black Salamander. Captured and presented to me by Mr. Brodie, Toronto.

61—*Plethodon erythronotus*. Red-backed Salamander. Common.

62—*P. var. cinereus*. Not very rare.

Family AMBLYSTOMIDÆ.

63—*Amblystoma punctatum*. Large Salamander. Common.

PROTEIDA.

64—*Necturus lateralis*; *menobranchus* (Baird), Mud Puppy. Taken by me in Lakes St. Clair, Huron, and Erie, and near Toronto; not very rare in the Don River.

65—*N. Huronensis* (Spec. novum). About a foot long; deep sooty-brown on back, lighter on belly. Gills bushy, brown, end of each orifice red, in three rows. Throat white. Vent reddish. Upper jaw hooked over lower; eyes black, not prominent. I have only obtained two specimens in streams during twenty-five years. Very rare. I venture this as a new species.

I trust to find time to send a history of the English frog, *Rana temporaria* in an early issue of the CANADIAN SPORTSMAN AND NATURALIST, and to demonstrate clearly peculiarities completely at variance with the form of *R. sylvatica*, which I think will prove their total specific difference. Any gentleman who may have a reptile of which he does not know the name, would confer a great favor by sending it in a box by mail, and after examination, I will return it with thanks. By this means, perhaps, new species, or varieties may be discovered in the Dominion.

JOHN H. GARNIER, M.D.

Lucknow, Bruce Co., O.

PROTECTION OF GAME.

The following address is from the pen of Dr. E. S. Holmes, President of the Michigan Sportsman's Association:—

"It has been asserted that Sportsmen's Associations are purely selfish; that the object of

game protection is to prevent the general public from the enjoyment of the health and recreation of taking, and the nourishment of partaking of wild game. Without pretending that sportsmen are possessed of more disinterested benevolence than the rest of mankind—without asserting that they labor more assiduously for the public good than those who do not enjoy the healthful recreation of forest, field, and stream sports with rod and gun—it is an unquestioned fact that the accomplishment of the objects for which game protection and sportsmen's associations are organized will promote the welfare of all classes of the community. Our object is to treat the wild game with which our State was once liberally supplied, as a wise husbandman would treat his domestic animals, so as to continue and increase the supply, that as population increases there may be an occasional full meal for all. We desire to prevent the destruction of game during their breeding and rearing seasons, and to prohibit all murderous systems of slaughter. We wish to prevent the killing of all kinds of animals when their flesh is unclean, unhealthful, and therefore not fit to eat. As a *sanitary measure*, this object of our Association should commend itself to every well-wisher of our race. It is impossible to tell how many of the insidious diseases that invite death to our dwellings, and clothe the people with the weeds of mourning, are produced by eating of the flesh of animals killed when they are unclean. Yet that sickness is so caused is patent to every one who has given this subject careful attention. It is a question worthy of consideration whether further legislation to prevent the sale and use of unclean meats is not demanded.

Again, as a *food supply measure*, the protection of game, quadrupeds, birds, and fishes, is one of vast importance. I do not need to read you, gentlemen, statistics to prove the point. The annual product of field and stream, lake and forest, provided free of cost by a bountiful Creator, is so important an item of the food of the people that an immediate stoppage of that supply would almost, perhaps quite, cause a food panic. During the open season (would it were only then) there is hardly a table in the land that is not frequently furnished with healthful nutritious game and fish food. How to continue and increase that supply is the question before us—the problem to be solved.

Then there is another reason why we should so manage as to increase rather than diminish

our stock of game and fish scarcely less important than those mentioned. And that is the healthful recreation enjoyed in its pursuit and capture. Everybody needs recreation—rest; and everybody will have it in some shape, and it is right, for nature demands it. Now, as there is no recreation more beneficial, and less harmful than true sportsmanship, or the pursuit of field sports with rod and gun, are we not engaged in a humane work while seeking to maintain the supply of game animals so as to make such sport possible? Mere out-door exercise without some intelligent pursuit, something in itself innocent to stimulate the mind, is of but little value as a recreation. All these are supplied in the pursuit of sportsmanship. The sportsman has to study the natural history of his quarry, and is frequently called upon to make the best use of his reasoning powers, as well as skill, in order to compass the capture of the wily object of his pursuit. I believe if there were no other reason for the protection of wild game than the incentive it gives to healthful out-door exercise, this alone would be sufficient to demand the most carefully considered legislation on this subject, and the most strict enforcement of the laws. These are but few, and perhaps not the most important, of the reasons that might be mentioned to show that the object for which sportsmen's association are organized—if accomplished—would promote the welfare of the people of the whole State. The mission of this association is to educate the people as to the habits of game animals of "fur, fin and feather," the best time and manner of capturing them, the correct names—both popular and scientific—by which they are, and should be, known; to teach the value of game birds as insect destroyers, as well as the usefulness of insectivorous birds that are not classed as game, in preventing the destruction of the crops of the husbandman by noxious insects; also to teach the farmers that true sportsmen are their best friends, for the above-named reasons; and to show by our actions as well as by precept that there is a vast difference between sportsmen and poachers, who slaughter with gun, trap and net, at any and all times, not only game but any other useful animal that may come within their reach.

The true sportsman is engaged in a work of benevolence and good will. Let us all be careful to so conduct ourselves at all times as to command the respect of all our fellow citizens.

THE
CANADIAN SPORTSMAN
AND
Naturalist :

A MONTHLY JOURNAL.



MONTREAL, JUNE 15, 1881.

Contents :

	Page.
The Natashquan.....	41
The Montmorency.....	42
Fish Planting in Lake Ontario.....	42
Wild Rice.....	43
Good Angling Prospects.....	43
The Quebec Marmot.....	43
Game in the North-West.....	44
The British Sky-lark in America.....	44
Montreal Branch Entomological Society of Ontario.....	44
Resources of the North-West.....	44
Scientific Review.....	45
CORRESPONDENCE :—	
Sporting and Natural History Capabilities of Belleville, Ont.....	45
Letter from Hammerless Greener.....	46
English Sparrows.....	46
Tenacity of Life in Birds.....	47
Our Forest Trees.....	48

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THE CANADIAN SPORTSMAN AND NATURALIST.

No. 6.

MONTREAL, JUNE 15th, 1881.

VOL. I.

We wish to publish the Game Laws of New Brunswick and Nova Scotia. Correspondents in the above Provinces would do us a favour by addressing authentic copies to 806 Craig Street, Montreal.

THE NATASHQUAN.

The river bearing the above name, meaning "where the seals laid," enters the sea on the north shore of the Lower St. Lawrence, some distance below the settlement of Esquimaux Point, and almost opposite the north-east end of the Island of Anticosti. The harbour of Natashquan is 244 marine miles from Gaspé Basin, and 372 from Quebec. The entrance to the river is about four and a half miles east from the settlement, and the whole of the coast at this place consists of sand. Iron sand also occurs in many places in abundance. It appears to us that the Natashquan has been during early ages, a great drift outlet from the far interior, as on its banks for twenty miles inland, the iron sand can be found at this day. The Chief of the Mountain Indians informed us that this river decreases in width and depth as one proceeds north; it branches off into a number of small rivulets, and that iron sand is seen far in the interior. Its estuary has doubtless undergone many early changes, and we are told they still continue. The channels of the river are greatly encumbered by sand, making it difficult for an ordinary keeled boat to reach the camp near the falls. This was the case in 1867, when two men were required to pole the tortuous stream. Half way between the estuary and the fall, the river is blocked up by three long islands, producing a strong current on the eastern channel. The fall is not more than nine feet, but on account of an almost squarely formed island above it, the force of water is great. It was the daring attempt to leap this

nine feet fall in a canoe, that cost Mr. Astley his life last summer. During the year 1867, only one salmon netting station was allowed by Government, and it placed in salt water one mile west of the Hudson Bay Post. We are now informed that there are nine or ten salmon nets placed in the estuary; two from the large sand island in the centre of the river outlet; one a short distance west of the Post, and three above it on the same side, and four from the opposite bank. Now we believe this is overdoing a river, which was always considered a good surface fishing one. It is therefore no wonder that *Salmo salar* is becoming scarce in this wholesale dry-salting, smoking and fin-canning age. The Natashquan from its coast-arenaceous situation, and wide extent of estuary will always be a good salmon river, but many agencies are at work to destroy its prolific proficiency; for instance, during our visit we made a charge before Commander Fortin against the Indians then camping near the Post, to the effect that when they depart for the north in August or September, up the Natashquan, they reside close to the salmon spawning grounds, and spear the fish indiscriminately. The speared salmon are spread open, dried, smoked, or formed into heaps in the woods for future use in case of want, or not being successful in the capture of caribou; but should they be fortunate in obtaining plenty of the latter, these heaps of speared salmon are not required, but are allowed to rot or become food for Labradorian quadrupeds. The Chief on being asked if the charge was true, answered that it was perfectly true; that he had no control over his people at this time. He honestly stated they speared the salmon to revenge the Government for taking from them the liberty of fishing the rivers when visiting the mission. What is to prevent these Mountain Indians, who range the coast from the Saguenay to

Blanc Sablon, from acting in like manner? If this system of destruction has been carried on since 1867, we cannot wonder that salmon are scarce. If the salmon entering the northern rivers were allowed to carry out natural laws, the Labradorian spawning grounds would ultimately attain their native fruitfulness, and the surface and estuary net-fishing in these rivers become the most celebrated in the world. When we visited Natashquan there stood an old dilapidated shanty opposite the pools, on the beams of which were recorded the fishing scores of the gentlemen who were there on previous years. To day it has a camp building almost equal to those on the Godbout or Moisie.

THE MONTMORENCY.

A good Brook Trout river entering the St. Lawrence about six miles east of the city of Quebec, where its waters fall from a height of two hundred and fifty feet, known as the "Falls of Montmorency." The locality is historical and a source of attraction to tourists and others visiting the ancient capital. About two miles above the "Falls" the scenery is primitively grand; limestone rock margins its banks; here it is formed into "natural steps," about a foot in thickness, and for half a mile they recede one above the other to the height of twenty feet, as regularly as if made by the hand of man. On the right bank, there is a terrace of similar rock, a short distance above the present bed of the river, retaining evidence that long before the era of civilization, and while the limestone was in a soft state, a powerful stream passed over it, as indicated by the presence of deep pot-holes containing stones formed globular by the friction of the water. In the woods adjacent, are marks of early agriculture, resembling plough-ridges, probably the work of troops encamped in the locality during the war. Further up are the "Saubles," where the rocks are covered with sand rolled down beneath the torrent of ages. From this point upwards there

may be found some good Brook Trout, certainly when the river is low in June. It is considered a good day's fishing to wade from the "Saubles" to the "Three Falls," near the parish of Laval. If a Quebecker goes for two days, the first start is generally in the vicinity of the "Saubles;" he wades the stream as far as "Moore's," resting for the night, and returning next morning fishing down with the current to the "Saubles," leaving the latter place at seven o'clock, and arriving at Quebec about ten p.m. There are some deep cool pools in Laval, parish of Montmorency, and the fish are of larger size as one proceeds towards the "Beaver Meadows," further north. The river is an outlet of Snow Lake, a large body of water in the northern portion of the County of Montmorency. The Lake is said to contain large trout, commonly called *lunge* or Lake Trout, which are generally fished for through the ice in winter.

FISH PLANTING IN LAKE ONTARIO.

The employes of the Government Fishery Department at Newcastle, Ontario, are alive and at work. It is stated that about 16,000 young salmon trout and 3,000 Californian salmon fry were placed in the lake a short time ago. The fishes are planted, indeed, at the risk of their lives, because the little creatures are not strong enough to take care of themselves, and it is possible, where there are so many pike, bass and other ravenous fishes and black water snakes, that the result of the planting will never be seen again. Yet, we are told by the knowing ones of the Department that each of these fishes will weigh from four to seven pounds at the end of three or four years. It is our wish to encourage fish breeding, and to see that every food fish indigenous to the Dominion should have proper facilities to propagate its species. There are many existing natural obstacles placed against the propagation of salmon in this country, which the Government should make efforts to take away. We are satisfied regarding the

utility and good results derived from salmon breeding in the neighbourhood of the sea, but placing young fish in a large inland bay or lake, where the water is swarming with enemies, is a blind proceeding, producing not one scientific result; it is actually absurd. Almost all the fish will be wasted, and the few that survive will doubtless leave the dangerous waters, never to return again. Have we not already proved that shad pass annually from the Gulf to Lake Ontario, and by so doing shewn that the lake is not land-locked to fishes which require a change of water? Therefore, the fact that shad pass up the St. Lawrence to Burlington Bay, is strong proof that salmon hatched on the north shore of the lake are not likely to remain behind, while they can find their way to the sea. If this is not the case, what has become of all the salmon hatched year after year at Newcastle? What benefit has the country derived commercially from this source to make up the annual outlay of money to sustain this establishment?

WILD RICE.

The cultivation of Wild Rice has been to a great extent successful when undertaken in the inland waters of Western Canada, where it is partly a native, and now it may be found in ponds, lakes and rivers in Ontario. We have no available record of how far north this aquatic plant or cereal can grow, but it seems extraordinary that in the Province of Quebec no attempt has been made to experiment with its seed. On the British side of Lake Champlain there are many available localities for the introduction of wild rice seed, and although we think it will not grow north of latitude 46.50, the seed should be sown in places at first south of the St. Lawrence, where, if it succeeds; and becomes acclimatized to the combined waters, then the good localities on the north side could be tried. It induces the presence of all kinds of wild water fowl in the autumn. In the west it grows in water six or eight feet deep, and the

red-winged blackbird, ducks and waders resort there and afford fine shooting. Sportsmen's Clubs are using every effort to extend its growth in Canada. It is also said that where it grows prolifically, it has been cut before seed-time by manufacturers, who find its fibre, taken from the under surface of the water to a depth of six or seven feet to be very valuable. It affords, it is said, the strongest kind of fibre known for making bank note parchment paper.

GOOD ANGLING PROSPECTS.

We have been informed since the Fishery Department at Ottawa, and the Fish and Game Club of the Province of Quebec stopped net fishing, that Muskilongé, Black Bass, Pike-perch, and other good food fishes occur abundantly in local waters this year. Of course, the abundance of the fishes is mainly attributed to this mode of preservation, which may be the case, but we are aware that fish, like terrestrial animals, have an occasional prolific specific year. Be this the case or not, there is a prospect that anglers will have good sport this season.

THE QUEBEC MARMOT.

(*Artomys empetra.*)

This quadruped, a rodent, allied to the ground squirrel (*Tamias*), does not occur to our knowledge on the Island of Montreal. It is, however, common in many other portions of Canada. The following remarks are made from one which we have had from the Eastern Townships. It is larger than the Alpine Marmot. Its head is smaller in proportion, and round; its ears are very short; its cheeks are ash gray, and its nose black. The fur is of a curious roan colour from the hairs being gray beneath, black in the middle, and white at the tips; the belly and legs are of a high-toned fawn, approaching to orange; the toes are black and naked; the tail short and rather bushy. This species inhabits Hudson Bay and the northern parts of Canada. It is a solitary animal,

burrows in the earth, but it ascends bushes and trees in search of buds and bark on which it feeds. It also eats certain species of coarse grasses, which grow near water. Indians capture it by pouring water into its holes. The flesh is considered delicate when the animal is fat. It may be a delicacy to the aborigine, but to the white man, its strong flavor is against it. It is easily domesticated. The teeth are strong, and formed similar to those of the Beaver. The linings of the mouth indicate rudiments of cheek pouches. When annoyed it produces a hissing noise. Milk pleases these animals greatly, and they lap it with sounds of pleasure.

GAME IN THE NORTH-WEST TERRITORY.

Last April, Messrs. Bird and Ballendine started for four days on the plains in pursuit of feathered game. The former shot forty-three geese, three swan and fifty ducks. Mr. Ballendine bagged the same amount of geese and swan, but did not care to waste shot on ducks. One of the swans shot by Mr. Bird measured seven feet seven inches from the tip of the wings; four feet three inches from the beak to tail, and weighed twenty-five pounds. It was sent to be stuffed for Chief Factor Clarke of Carleton. What a grand country for the sportsman.

THE BRITISH SKY-LARK IN AMERICA.

Several years ago, a number of Sky-Larks were liberated on Long Island, U.S., with the object of acclimatizing the birds. Nothing further was seen of them until early in May last, one was heard by Mr. John Burroughs, a writer for *Scribner's Magazine*, who says that he sees no reason why the British Sky-lark should not thrive in America as well as in Europe. Acting on this suggestion, Mr. Charles R. Rowe, of Cornwall, England, an enthusiastic admirer of Mr. B.'s writings, has sent him a number of Sky-larks which arrived safely in New York, and have been forwarded to Mr.

Burroughs at Esopus-on-the-Hudson, where they will be set free. The Editor of this journal contemplates having a pair of British Jackdaws sent out this summer. When this bird is properly domesticated, it is doubtless mischievous and a thief, but with these exceptions we will be compensated by its odd tricks.

MONTREAL BRANCH, ENTOMOLOGICAL SOCIETY OF ONTARIO.

The Eighth Annual Meeting of this Society was held on the 10th of May. The following gentlemen were elected to office for the ensuing year:—

President—Mr. H. H. Lyman, M.A.

Vice-President—Mr. William Couper.

Secretary—Mr. George J. Bowles.

Curator—Mr. George Bowles.

Council, Messrs. Robert Jack (Chateauguay Basin), F. B. Caulfield, and R. Burland.

Several new members were elected, and the Annual Report gave a satisfactory statement of the condition of the Society.

A paper entitled "Notes on some species of *Hymenoptera* occurring at Montreal," was read by Mr. F. B. Caulfield, and another on "Instinct in Insects," by Mr. G. J. Bowles. We regret that want of space prevents us from publishing these papers, but we are glad to say that the study of this interesting branch of Natural History—Entomology—is being zealously carried on by this Society, particularly as regards the insects of the Island of Montreal.

RESOURCES OF THE NORTH-WEST.

Professor Macoun of Belleville, Ontario, who delivered a lecture last March before the "Ottawa Field Naturalist's Club," on the Geographical Distribution of Plants and Animals of the North-west, enunciated an important law accounting for the well-known heavy crop of grain secured so far north, i. e., "the law of reproduction, which was wonderfully increased as plants approached their outer or northern limit. Hence, the cereals grown in the

districts alluded to, so near the extreme northern limit, were found to be more prolific than those grown anywhere else. Ordinarily on an ear of wheat grown in Ontario each fascicle contained but two grains. In Winnipeg they averaged two and a half, at Prince Albert four, and at Edmonton the wheat ears were found to average nearly five fascicles across the ear, extending the whole length of the head. When it was taken into account that the heads also increased in length it was not difficult to understand that the same number of stalks that would produce 15 bushels to the acre in Ontario would produce 25 bushels at Winnipeg, and from 30 to 40 bushels farther north. Speaking of the grasses found in the various parts of the country the Professor stated that there was no difference between the grasses grown under the eastern base of the Rocky Mountains and those found further east, commonly supposed to be inferior in quality. The only difference was that on the dry plains of the south hardly any grasses produce a large crop of seed, and from that cause the fodder afforded by the natural grasses was richer in nutriment equalling first class hay. He referred to the popular belief that cattle fatten on the grazing lands of Texas and warm districts in the south, which he characterized as a fallacy as shown by the custom amongst grazers of driving their herds northward to fatten. This was also in obedience to a well-known botanical and geological law, which provided that the farther north animals are found the greater their capacity for putting on fat. On this ground he was convinced of the great advantages possessed by the North West as a cattle raising country. The lecturer referred incidentally to the fuel supply of the North West, and ventured to say that there was untold wealth in the form of great peat bogs within forty miles of Winnipeg, the manufacture of which could be prosecuted with great convenience in that dry climate."

SCIENTIFIC REVIEW.

Osteology of *Speotyto cunicularia* var. *hypogaea*, and of *Fremophila alpestris*, by LIEUT. R. W. SHUFELDT, U. S. Army.

The two birds above named, one the Burrowing Owl, which "occurs on the prairies west of the Mississippi, notably in the villages of species of Marmot Squirrels, the deserted burrows of which it occupies for the purpose of nidification. Perhaps no species in the great Order to which it belongs, have less limited

power of flight, none so habitually congregate together in certain localities and choose the open treeless country as their resort, and make their nests underground." Mr. Shufeldt exhibits expertness in being a correct comparative anatomist, as every portion of the skeleton of the bird is illustrated with great care; all portions of which are fully explained in the text. There are three plates on the structure of the Burrowing Owl. Also, the osteology of the Shore Lark (*E. alpestris*), a bird said to nest on the Island of Montreal, is illustrated. Mr. S. was fortunate in obtaining several hundred specimens in March, 1880. He says—"As they afterwards lay on the table of my study, one would almost have said before submitting them to careful scrutiny and examination, that not only was true *alpestris* represented, but *leucocolema* and *chrysi lama*, described by modern writers. I have never seen the black pectoral crescent of this bird in the low position in which Audubon represents it in his work." Mr. S. has evidently identified but one species, *i. e.*, *alpestris*, and his description of the skeleton, simply reminds the student that of the several genera that go to make up the family *Alaudidae*, or Larks, but one genus has fallen to the lot of the North American fauna, and that the genus contains but one species, *i. e.* *alpestris*.

Correspondence.

SPORTING AND NATURAL HISTORY CAPABILITIES OF BELLEVILLE, ONTARIO.

SIR,—As I understand from your prospectus that the indication of favourable sporting and collecting localities is to form a prominent, as it will certainly be a valuable, feature in your serial, I believe I will be doing a kindness to many of my fellow sportsmen and naturalists by making them aware of the advantages offered to them by this locality. The city of Belleville is situated on the north shore of the Bay of Quinte, at the mouth of the River Moira. Hotel and private accommodations are to be had of excellent quality, and at most reasonable fares. The Bay swarms with fish,—pike, pickerel, (doré), maskilonge, black and Oswego bass, perch, lake trout, rock bass, sturgeon, suckers, cat-fish, sun-fish, herring, whitefish, and eels are taken from its waters. The bass are especially fine; I have taken them myself up to 3½ lbs. weight, and I saw one some years ago

taken by Mr. C. Pauli, gunmaker, upwards of 7 lbs. First-rate sport can be had on the "bars," within a circle of a mile from the harbour mouth, and boats and boatmen, with all requisites can always be had. To the ornithologist Belleville affords a fine field for collecting; the neighboring woods afford shelter to various birds of prey, from the bald eagle down to the sparrow-hawk and shrike; the bay is the favorite resort of many ducks, loons, grebes, gulls, terns, and shore-birds, while the extensive marshes of Ameliasburgh, harbour herons, bitterns, mud-hens, snipe, rails, and other waders, and the golden plover frequents the commons in large flocks. Professor Macoun has collected during last winter and spring over 70 species of birds, a list of which I hope to be able to send shortly. About four miles below the city is Massasauga (Mississauga) Point, one of the most picturesque sites on our lovely bay. Here a large area is being fitted up as a summer resort, with a hotel and several detached cottages, and it is intended to place it in hourly connection with the city by a special steamboat. Here are also held the regattas of the Belleville Yacht Club. Having within its limits the terminus of the Grand Junction and Belleville and North Hastings Railways, Belleville offers every facility for visiting the mining and hunting districts of Hastings and Peterborough Counties, where the geologist can study the conformation of the Laurentian and Huronian series; the mineralogist can collect the iron, lead, copper, gold and other ores and minerals of this now celebrated region; and the sportsman will find deer and bear enough so exercise his skill upon with the rifle, and the woods alive with ruffed grouse (partridge), while the lakes and rivers swarm with fish of every description, from the lordly maskilonge and great lake and speckled trout, to the humble perch, and the despised cat-fish. Altogether, I do not know any place where the comforts and conveniences of city life can be so thoroughly combined with the enjoyment of country sport, as in our own little "City of the Bay."

JAMES T. BELL.

Belleville, May 25, 1881.

DEAR SIR,—I have read with very great pleasure the accounts given in your journal, by "12-bore Greener," of his trials at the target. I consider that Canadian sportsmen are much indebted to any one of their number, sufficiently spirited to take the trouble, and

incur the expense of making such reliable tests of the shooting qualities of "choke-bored" guns, with the various charges of powder and sizes of shot. With my Hammerless Greener, which is a No. 12, choked to No. 15, at 80 yards, I put 12 pellets of No. 6 American chilled "Tatham" shot, (almost as large as No. 5 English), into a foot square, and at 90 yards 7 pellets into the same sized target. This was with 3 drams of powder and one ounce of shot, and the penetration was sufficient, at both distances, to bury the shot out of sight in a dry pine board. I think, for general utility, handiness, convenience, *rapidity of ignition*, and unquestionable *rapidity of firing*, the hammerless gun is infinitely superior to the gun with hammers; and, within a very short time, amongst sportsmen, at least, must entirely supersede guns of the old style of construction. The hammerless gun of improved make is perfectly safe, handy to use in a boat or canoe, and when loaded is always ready. Having no hammers it can be put easily and conveniently into a water-proof cover, and in use the breech action can never become locked by the striker forcing its way through the cap and sticking there, as sometimes happens with hammer-guns. The irresistible force with which the tumblers are drawn back to cock, entirely obviates the chance of this difficulty occurring. In addition to the foregoing advantages, the facilities afforded for fighting and shooting amongst brush by the hammerless gun are unquestionable. Hammers may be ornamental, but in the face of hammerless guns they are entirely useless and superfluous. For the information of "12-Bore Greener," I may say, that in my one trial with half ounce charges of shot, although I had not the appliances for measuring the force and velocity of the shot, the penetration was eminently satisfactory.

Yours truly,

HAMMERLESS GREENER.

Ottawa, May 23, 1881.

P. S.—No sportsman of my acquaintance ever made a practice of shooting Robins. Small boys and thoughtless persons alone in this neighborhood are guilty of this indiscretion.

ENGLISH SPARROWS.

The question as to the desirability or non-desirability of introducing the English sparrow, *Passer Domesticus* into Canada has been not unfrequently discussed. My own opinion has always been adverse to such introduction,

and my principal reason, as a lover of birds, has been, and is, that the English sparrows drive away our own more charming native birds. That opinion has just been emphasized by the following incident. I was passing down one of our streets the other morning when I observed four birds in a state of great commotion on the ground, kicking up, in fact, an awful dust; the birds, being, as I soon ascertained, three English sparrows and one Chipping sparrow, *Spizella socialis*. The poor little native bird was being unmercifully attacked by the three more robust immigrants, and I verily believe would have been killed, but that my companion, a lady, begged to be allowed to rescue it by driving its aggressors away. For myself, I confess I should have been cruel enough to await the issue of the conflict for the purpose of exemplifying my theory, whereas now, instead of a charge of "wilful murder," I can only prefer that of "assault with intent."

VINCENT CLEMENTI, B.A.

Peterboro' May 9, 1881.

NOTE.—The House Sparrow, (*Passer Domesticus*) has been of good service since its introduction into Canada. Previous to its arrival in Montreal, it was almost impossible to keep down the millions of house-frequenting spiders, which during summer, festooned the interior of our houses, and exterior of outhouses with their webs. This nuisance is now lessened, as the bird relishes the spider, and whenever one of the latter shows itself, it is doomed. The acclimatized sparrow has besides adopted the flycatcher's system in obtaining its prey; it also imitates the woodpecker by holding itself with its claws and tail against a wall, picking from the interstices any insects lurking therein. Before the house sparrow was liberated in Montreal, an entomologist could, on a June morning's walk along the garden fences in the western portion of the city, pick up probably from twenty to twenty-five beautiful rare insects for his collection. This cannot be done now, as the sparrow destroys all insects whether he eats them or not. This is the only fault we have against him—that he makes no discrimination in his selection—he kills as many beneficial as injurious insects. We have seen

this pugnacious little bird attack the large Northern Cicada, holding it in its beak while the insect made the curious noise with its drums, which we frequently hear in the early part of September. The bird heard it, but the insect's noise was of no avail; the sparrow placed its foot upon it and picked it to pieces.—En.

TENACITY OF LIFE IN BIRDS.

DEAR SIR,—Last fall, I received from the Manitoulin Islands, a living Eagle—the Gray Sea—*Haliaeetus albicilla*), to stuff. Wishing to kill it as quickly as possible, I procured a strong acid poison from a druggist, and gave it a dose said to be sufficient to destroy its life in a few seconds. After waiting for half an hour, I went out expecting to find it dead, but there he sat as upright as usual. I gave the bird a second dose and patiently awaited the result. It had no more effect than an evident disagreement in the appearance of water from its mouth. Then I gave it a large piece of meat covered with arsenic and retired to rest, expecting to find him stiff and ready to stuff next morning, but to my surprise, when I went to his cage, it stood as upright as ever, and looking none the worse. I had laudanum in the house, and it occurred to me that I could put him in a deep sleep; therefore I gave the Eagle one half ounce, which had no apparent effect. I then procured strychnine, of which I gave him a large dose; in a short time it took effect, and the strong frame which withstood the other poisons had at last to succumb; it swayed with violent convulsions, and as I stood looking on its agony, I felt that I was the cause, and guilty of a crime. A few weeks ago I had occasion to kill a great Horned Owl, (*Bubo Virginianus*), and remembering my former experience with the Eagle, thought to try a more speedy method. I took a revolver carrying a No. 22 cartridge, which I fired close enough to penetrate the centre of its body, and the only apparent effect it had was merely to tip him off his perch, which he afterwards regained. Four hours afterwards I found him still sitting there, appearing all right. I fired the second ball forcing him from his perch, which he did not afterwards regain, yet he lived two days afterwards. On skinning this bird I found that both balls passed through his body. On the 27th May last, I had occasion to kill another Horned Owl, and remembering my former unsuccessful experience I thought to give him a blow which would pro-

duce instant death. I prepared a sharp-pointed instrument, and with one stroke the point entered the brain to the depth of three eighths of an inch; even after this the owl lived over one hour. I would be pleased if some of your readers would suggest a more speedy way to kill large birds?

Yours, &c.,

R. B. SCRIVEN.

Gravenhurst, Ont.

NOTE.—The editor of this journal has had long experience with large living wild birds. The best mode and the quickest to destroy bird life, is pressure across the sternum. In this way the skin is not destroyed, and it dies without great pain or struggle.

OUR FOREST TREES.

CHESTNUT; *Castanea vesca*.—A large and abundant tree, valuable for its nuts and its timber. The nuts, though much smaller than those of Europe, are sweeter and more nutritious. Close observers say that the chestnut moth lays one egg in each bur, and thus they account for the fact that in a quantity of chestnuts, about one-third are found to be wormy. The timber is more used than formerly. Its durability has long recommended it for fence posts and rails, and of late years it is largely used in cheap furniture, and the interior wood work of houses. If to be varnished or oiled, the pores should be carefully filled.

AMERICAN HORNBEAM; *Carpinus Americana*.—A small tree, 20 to 30 feet in height, admired for its soft green foliage, which in autumn changes to bright scarlet and orange. The wood is white and solid and is used for mallets and levers.

LEVER WOOD; *Ostrya Virginica*.—This closely resembles the last in size and foliage. The uses of the wood are similar, but it is even harder and tougher, and it is often called "iron wood."

BUTTERNUT; *Juglans cinerea*.—A broad-topped tree, seldom more than 40 to 50 feet in height. The nut when half-grown makes excellent pickles, and when ripe, if carefully dried, contains a sweet kernel. The wood is light and durable, of a pale reddish color, and is used for making drawer fronts, coffins, gunstocks, and panels of carriages.

BLACK WALNUT; *Juglans nigra*.—This tree is less abundant in New England than the but-

ternut which it much resembles, in size, form, and foliage. The leaves are smother, and the fruit spherical, while the butternut is long and oval. In the States bordering the Ohio River, the Black Walnut reaches its greatest size and yields its valuable timber in its highest perfection. This when first cut is of a purplish color, but soon changes to a rich dark brown, becoming in some cases nearly black with age. It is beautifully shaded and admits a fine polish; and no other American wood is so largely in demand for furniture and ornamental wood work of every description. The rapid consumption of walnut lumber is rendering it every year scarcer and more valuable in the market. It has also been largely exported to Germany and other foreign countries.

ENGLISH WALNUT; *Juglans regia*.—This tree has been successfully introduced into New England, but is less hardy than our native species. Its well known nut is in constant demand.

BLACK BIRCH; *Betula lenta*.—This is the most beautiful and valuable of the birches. In early spring its long bright coloured tassels give it a pleasing appearance, and it is among the first to put forth its leaves. In the forest it often reaches a height of 70 feet. When standing alone its long hanging spray earns for it the name of the weeping birch. The inner bark of young shoots has an agreeable spicy taste and odor. The wood is easily worked, yet firm; is of a delicate rose colour and presents a handsome grain. It is in demand for cabinet furniture, and is sometimes called "American Mahogany."

YELLOW BIRCH; *B. lutea*.—This is a rather larger tree than the preceding, and when seen in perfection is almost as beautiful. The scaly bark in long rolls adhering, by the middle or one end, and adorned with mosses and lichens, gives to the trunk a unique appearance. Its wood, though of less value than that of the black birch, is often used for making chairs and bedsteads. Its resinous bark is the tinder of northern voyageurs, and a flame will shoot to the top of a lofty tree in a few seconds, lighting a wide circuit.

RED BIRCH; *B. nigra*.—This graceful tree is usually found bending over a stream, and in some sections of New England is known as the "river birch." Its usual height is 50 feet. The wood is compact and white, and is now but little used. The earlier settlers made spoons, bowls and trays of it, hence it was called by them "spoon wood."

(To be continued.)

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THE
CANADIAN SPORTSMAN
AND
Naturalist:

A MONTHLY JOURNAL.



MONTREAL, JULY 15, 1881.

Contents :

	Page.
To Anglers.....	49
Salmon Fly Casting.....	49
Bird Nesting in Labrador.....	50
To Sportsmen and Naturalists.....	52
The Racoon.....	52
CORRESPONDENCE :—	
Letter on Wild Rice.....	53
“ on Salmon Fishing.....	53
“ on Deer's Horns.....	54
Our Forest Trees.....	56

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THE CANADIAN SPORTSMAN AND NATURALIST.

No. 7.

MONTREAL, JULY 15th, 1881.

VOL. I.

TO ANGLERS.

We will publish the salmon scores of gentlemen fishing Canadian rivers this season, provided they are thoroughly vouched by one of the parties. We would be pleased to have scores already concluded sent to us in time for our August issue.

SALMON FLY CASTING.

Gentlemen fond of surface fishing, and who have had experience in the art of casting the fly, have, generally speaking, a fair knowledge of the sporting value of Canadian rivers. A rough estimate of the product of a river can be given by any one who for a few seasons has handled the rod on its pools. Those who have studied the salmon run of a river, can give a rough calculation of the number of fish entering it. Independent of the annual score of a good surface fished river, the average amount of salmon passing the pools to the spawning grounds can be ascertained. Ask any one of the proficient fishermen of the Department at Ottawa, the cause of the late scarcity of salmon in Canadian waters, and he will give you as much information on the subject as astronomers do regarding the late comets. There are several maritime rivers which should be a source of revenue to the Dominion, and they are evidently neglected by the Fishery Department. Not that alone, but it seems as if ignorance prevailed in regard to what constitutes a salmon river. We have an instance of this in the Trinity River near Pointe des Monts, which is delightfully situated, and on which a guardian has been placed for years past. The Trinity could not be leased for surface fishing, although a Government official made annual repeated attempts to fish it with the rod. It was abandoned. It is known to us that the Trinity River could be leased for years past, indepen-

dent of an expert fisherman's report that the river was worthless for surface fishing. The truth is that he could not hook a fish because he did not understand the proper mode to fish the Trinity, and the river was therefore thrown off the list of salmon rivers for years past. Residents on the coast know that it was good, or at least that Salmon entered it, therefore one of them made a proposition to the Fishery Department, offering to make a trial of the river if the Government would pay for his time in company with two Indians. The offer was accepted, and he proved that the Trinity was a fair salmon river, he having hooked fish with the fly on the first trial, while the expert sent from Ottawa could not get a rise. The way in which this is accounted for is simply that the casting of the fly cannot be the same on all rivers. We have been informed that this is a well-known fact to parties who have fished various rivers. For instance, the casting of a salmon fly on the Mingan is different from the mode of casting it on the Trinity, and since the parties who now lease the latter river, have discovered the style they sometimes procure as good sport as on other rivers on the same coast. Now, after deriving this knowledge, it occurs to us that there may be several rivers on both sides of the Lower St. Lawrence within the ken of the Fishery Department in which salmon enter that are rejected, because they were never properly fished. We have penned the above for the simple reason that we are aware that the maritime rivers are not properly looked after by the Fishery Department, and besides we consider that too much money is being expended on lake fish breeding, to the detriment of the salmon rivers, which should receive more attention. Take the Godbout for example; look at the improvements made on it by the present owner, who has profited by the outlay, by pleasure and comfort.

BIRD NESTING IN LABRADOR.

The Canadian coast and islands which margin the south-eastern portion of the Peninsula of Labrador, embracing the north shore of the Lower St. Lawrence, from Seven Islands to Blanc Sablon, near the North-West River, are interesting localities for the naturalist to visit. The aborigines, and their modes of life; the magnificent lakes and picturesque rivers; the fisheries of the white man, and the singular methods by which he obtains a subsistence on the rock-bound coast, are subjects claiming our attention at this age of human knowledge. Labrador was visited by Audubon before he issued his beautiful work on the Birds of America. He was aware that without a thorough ornithological knowledge of these northern bird breeding-grounds, his book would contain but few facts in addition to those given by Wilson and prior writers on our birds and quadrupeds. The naturalist who now retraces Audubon's footsteps along the Labradorian coast may fully realize the accuracy and truthfulness of this clever writer. In 1867, such was the object of the Editor of this journal, who went there to collect a series of bird eggs, and determine the species breeding on the coast. On the rocks surrounding the beautiful Bay of Seven Islands, the nests of several marine birds may be found. The greater portion being the Herring Gull, (*Larus argentatus*) and the White-winged Guillemot (*Uria grylle*). Proceeding towards Mingan, Leach's Petrel, (*Thalassidroma Leachii*) may be seen skimming over the stormy sea, but where the birds nest is only conjecture. There is a sand cliff between the Shel-drake River and the latter place, which may be occupied by these birds. The nesting habits of the Petrels being similar to the Sand Martin. Approaching the St. John River, a rock stands some distance seaward; it is called Isle Parquette; it is covered with earth and turf to allow numbers of the Arctic Puffin (*Mormon gracialis*) to burrow and form their nests. This rock is an extensive Puffin breeding-

ground. The Mingan group of Islands in the vicinity are heavily wooded, and nests of the common Eider Duck (*Somateria mollissima*), may be found occasionally. The nests of this species have been so frequently robbed by the people from the coast, that these islands are not now selected by the Eider Ducks for purposes of nidification. It is only on the islands below Point Esquimaux, which are not so easily accessible to man that the nests of these birds are found. The oölogist who can visit the group of islands between the latter place and Watsheesho, about the middle of May, will find plenty of material, but few species. There are abundance of Eider Duck's nests. Indeed, one small island visited by us, was almost covered with the nests of this species, and here we first found the nests of its congener the King Eider, (*S. spectabilis*.) It is in this region that one can realize the wildness of northern scenery. The diversity of the innumerable rocky islands which are surrounded by the sea; some bare and weather-beaten; others with trees of stunted growth, while a few tower to a great height, and are densely covered with wood. Such are the island homes of the sea birds. On one of these rocks called Table Rock, representing a platform about two acres in extent, we found the nest of the Black-backed Gull, (*Larus marinus*), and the Herring Gull (*L. argentatus*). It is a curious fact, that each of the rocky islands have been for centuries, the nesting-ground of marine birds, each species selecting and holding to this day its favorite island, where they produce a progeny forming a community of thousands each succeeding season. For instance, an island on which the Arctic Tern (*Sterna macroura*) breeds, cannot be invaded by any other species; the little creatures will fight even the larger gulls, and hold the locality to themselves. This is not the case with the Great Black-backed Gull, and the Herring Gull, the nests of which are frequently found on the same island, almost within three feet of each other. This is partially accounted for, and further to show the instinctive nature

of the same species which formerly bred in large numbers on the south coast of the Gulf, where their nests were annually robbed, the gulls as a last resource took the trees to build their nests, in order to be out of the easy reach of man. Several miles further down the coast between Watsheesho and Washshecootai, the rocky islands contain many fissures, and these are occupied by the Razor-billed Auk, (*Alca torda*), a bird which makes no nest. It deposits a single egg which is laid in a crevice. When searching for the eggs of the Auk, on several occasions the parent bird was found dead alongside of its egg. In every instance a slight wound was detected on the side of the head, behind the ear. We were afterwards informed that these birds were frequently destroyed by a species of weasel which inhabit the island. As we proceed further, the harbor of Kegaska is reached, below which stands the rocky islands of Musquarro, about five miles from Washshecootai Bay. Here the collector will find the home of the common Guillemot, (*Uria ringvia*). From this point northward this bird deposits its egg on any bare cavity it can find. These rocks are visited by men from vessels sent to collect them when fresh, and a large trade is annually made in the eggs of marine birds, which are thus collected and carried to the American markets for sale. The Indians, generally arrive on the coast at the time when ducks, gulls and guillemots are nesting. On their way to the Mission Church at Mingan, all the bird-frequenting islands are visited by them, and every fresh egg found is taken away and eaten. They also collect the down from the nests of the Eider Duck, which they generally sell at the rate of sixty cents per lb. We have slept on eider-down beds on the Labrador coast, each of which was valued at from sixty to seventy dollars. The residents send boats to these islands where the eggs of ducks, gulls, guillemots are collected and tested by placing them in water. The fresh eggs are placed in barrels containing a solution of water and lime, and in the absence of the latter, ashes will answer,

and they thus keep good for winter use. The great bulk of the marine birds found breeding on the northern coast of the Gulf of St. Lawrence, are similar to those found in the North of Scotland. The true American marine birds, such as the Labrador duck, (*Camptolæmus Labradorius*), Velvet duck, (*Melanetta velveta*), Surf Scoter, (*Palionetta perspilluta*), Brant Goose, (*Bernicla brenta*), Sea Dove, (*Mergulus alle*) and the genus *Stercorarius* have not been discovered breeding on the southern coast at Labrador. Audubon says that he found nests of the Surf Scoter on the margin of lakes near the south coast, but the Indians inform us that these ducks now nest only in Northern Labrador. The Northern Phalarope (*Phalaropus hyperboreus*), in summer plumage was shot near Mingan, but the nest has not been discovered. The Red-breasted Merganser (*Mergus serrator*) occurs abundantly, nesting on the margin of inland lakes. The woodland birds which were found breeding near the coast were very few. Sir Greville Smyth, who was fishing the Mingan, found a nest of the Red-tailed Hawk, (*Buteo borealis*). It contained two young ones, which could feed themselves at the end of July. The Pigeon-Hawk, (*Hypotriochius columbarius*) nests on this coast, and also on the island of Anticosti. We found the nest of the Black-poll Warbler, (*Dendroica striata*), on the third of June. It was in a low fir tree, and contained four eggs. A nest of the Black and Yellow Warbler was discovered on the 17th June. The common Yellow Warbler (*D. aestiva*) was abundant, also the Redstart, (*Setophaga ruticilla*). The White-throated Sparrow (*Zonotrichia albicollis*), and the White-crowned Sparrow (*Z. leucophrys*). Two species of Cross-bill; the Pine Finch, and the Purple Finch were noticed. The sweet song of the Fox-coloured sparrow (*Passerella iliaca*), is pleasing to the ear as we wander through the open parts of these northern forests, and it was with no little joy that we discovered the nest on the 15th of June, and authenticated its eggs for the first time. Audubon has made a

mistake in his description of the eggs of this species. The egg is larger than that of any other sparrow found within this latitude, and they are completely covered with blotches of a ferruginous tint. Contrary to the habit of sparrows, this nest was built in a low fir tree, about three feet from the ground. The Blackburnian Warbler was common in June in the woods of Natashquan, but no nest was found; it is possible that they pass on to the northern margin of the forest which adjoin the plains to breed. Five eggs of the Ptarmigan (*Lagopus albus*) was noticed strung against the wall of a house in Kegaska. The nest was found in the woods behind the settlement. On the 8th of June, When at Watsheesho we noticed the Canada Jay (*Perisoreus Canadensis*) in company with its young, which were nearly fledged. Being anxious to ascertain what these birds fed on, as their nests must have been formed about the middle of April: four of these were shot, and their stomachs contained abundance of a soft red berry that grows in swampy places on the plains. It is a species of cranberry, which ripens under the snow during winter. They are gathered by the people on the coast who convert them with sugar into a delicious preserve. We will close our present remarks by noticing that the Bald Eagle and the Raven occupy the cliffs near the River Corneille, where they bring forth their young. We will give a list of the Western forms of birds occurring on the Labrador coast, in our next number.

TO SPORTSMEN AND NATURALISTS.

Our periodical is the only one in the Dominion of Canada which professes to devote its columns to pure sport and Natural History. It is within the reach of all who wish to obtain information on these matters. We are anxious to increase our list of subscribers, and therefore ask all lovers of true sport to support it. We solicit correspondence from the Sportsmen and Naturalists throughout the Dominion; also ask them to advance our efforts to sustain

the journal. So far, we cannot complain of our success,—we have some of the best men in the country on list—but doubtless there are many Canadian gentlemen, fond of the rod and gun, who have not seen our magazine. We would therefore consider it an act of kindness if those who have subscribed, would induce their friends to send us their names. The price is one dollar per annum in advance. The back numbers from January can be supplied.

THE RACCOON.—(*Procyon lotor*.)

This quadruped appears to have a wide range, occurring from Carolina to the cold latitudes of the fur country. A male raccoon was shot on the 1st of July, a short distance west of the water wheelhouse of this city, near where a female of the same species was shot last year. The animal is not common on this island. It belongs to the plantigrade section of the *Carnivora*, but though the soles of the feet are naked, it is only while at rest that they are fairly applied to the ground. While in motion the heel is raised, yet the gait of the raccoon is heavy and awkward; its limbs are short and stout, its back is arched, and the body is round, thick, and massive, with a marked fulness about the flanks, adding to its breadth and making the limbs seem shorter than they are in reality. Its fur is of two kinds, a soft full undercoat, and an upper vest of long and rather coarse hair. The general colour is dusky grey, the tint arising from each long hair being annulated with white and tipped with black. The face, cheeks and throat are white, with an oblique black dash across the face, which also spreads round the eyes; the tail has four or five dusky-black rings; the length is about two feet, of which the tail is eight or nine inches. Left to itself the raccoon sleeps in its retreat during the day, rolled up in the form of a ball, with the head placed between the thighs. As evening sets in, he begins to prowl for food; roots, succulent vegetables, insects, worms, birds and their eggs constitute its diet. In captivity, it is easily

tamed and even appears susceptible of some degree of attachment. It can climb with the greatest skill in the manner of a bear—ascending or descending a pole with the utmost freedom. With much caprice there is no little cunning in the character of the raccoon, mixed with malice and a fondness for destruction.

FOR FIELD AND CAMPING GROUND.—We call the attention of our readers to *Lyman's Concentrated Extract of Coffee*. We have tasted this delicious coffee and heartily recommend it. Read the advertisement.

Correspondence.

To the Editor of the CANADIAN SPORTSMAN AND NATURALIST :

DEAR SIR,—In your issue of June 15th there is an article on the cultivation of wild rice, in which it is implied that the plant will grow in lat. 46.50 or south of that. We have in this Province, between 45 and 46, on the St. John River, hundreds of acres of swampy ponds, in which the wild duck oat will grow freely, and in which sportsmen have frequently talked of planting the wild rice, but have dropped the idea for want of information. The article in your interesting little journal has revived the interest in the subject, and we would like to procure information on the following points:—

1st. Will it grow in dead water ponds as well as in ponds in which there is more or less current?

2nd. How is it to be planted and at what season, and what average summer depth of water is best adapted to its growth?

3rd. How and to whom should application be made for seed, and what is the price per bushel?

Although we are north of 54 here, our climate on the lower St. John is not nearly so severe as in the Province of Quebec—as a rule—the influence of the fog, &c., from the Bay of Fundy having an effect to produce a warmer temperature. Any information you can furnish either in the columns of the SPORTSMAN or by letter to the undersigned, will be thankfully received by the Sportsmen of this Province.

I remain, Sir, yours very truly,
CHAS. W. BECKWITH.

NOTE.—The swampy ponds referred to by our correspondent, are just the localities where wild rice will grow, and it makes little difference whether it is placed in dead water, or where there is an easy current. The fact that wild oat occurs in ponds in the St. John River, is proof sufficient that the rice plant will grow there; and moreover the oat will ultimately succumb, as the rice is more prolific, and the strongest aquatic cereal. We would suggest September as a good season to cast the seed into the water; but prior to that it should be mixed with marsh mud for two days. In Ontario, it grows from a depth of eight feet. Wild rice seed is sometimes advertised in *Forest and Stream*, but we are not prepared to say what it costs per bushel. It is abundant in Rice Lake and Lake Skugog, Ont. Perhaps a subscriber residing near one of these lakes will answer Mr. Beckwith's third question.—Ed.

To the Editor of the CANADIAN SPORTSMAN AND NATURALIST :—

DEAR SIR,—A strong feeling is aroused here in the maritime provinces, against the system pursued by the Dominion Government, in leasing out Salmon rivers to single individuals and clubs, thus closing them to the great mass of sportsmen. This partakes too much of the old feudal times, when a few favored ones were allowed privileges that were forbidden fruits to the general public. In these provinces both parties Liberal and Conservative, are working together to bring an overwhelming pressure to bear on our representatives in Ottawa to do away with this despotic law. Make those rivers open waters, then charge say \$1.00 each rod used a day, and the Government would receive a revenue fifty times in amount to that it now derives from this source. Several thousand sportsmen would visit us each year from other countries, and when we consider that these sportsmen while here would spend from \$50 to \$200 each, we can readily see the benefits that this country would receive, and at the same time resident sportsmen who are found among our best citizens, would be able to enjoy the pleasure of Salmon fishing, which is now denied them. Until the New York Club bought the Restigouche River, near Matepédia; Camp

belltown was, during the summer months, crowded with strangers who came to angle in those waters, now the village is nearly deserted by that class of tourists.

At this age everything that tends to restrict the liberties of the general public for the benefit of a few, will be put down with a strong hand. All Salmon rivers that are of easy access to the public, such as the Restigouche, Matépédia, Cascapédia, &c., instead of giving the Government, as they do now, a mere pittance, should yield a revenue of several hundred dollars a week during the open season. Unless this evil is soon remedied there will be serious trouble, for the feeling here against it is strong and deep, and will sooner or later show itself on the surface with a power that will sweep all opposition before it.

STANSTEAD.

Restigouche, N.B., July 9, 1881.

DEER'S HORNS—A ROYAL HEAD.

Every hunter has heard disputes regarding what may be termed a full-grown, or "Royal" head. The fact is, a deer's age is known like sheep, viz: by the teeth, so that a practical butcher is a better judge on this point, whereas I am only an expert. The horns of our common deer (*Capreolus Virginianus*) take three seasons to come to maturity, so that in its fourth autumn or fall, they are as large as that animal is likely to produce them. In the first fall there are no horns, although I have once or twice seen little nubs one inch or so in length, and it is foolish to look to the size of the horns as a criterion of his age. It is similar to guessing the age of a game cock by the length of its tail feathers. In the first growth, or second fall, the horns are very variously produced. Some bucks have merely a long, single prong, and hunters then call them "spike," or "prong" bucks, and they are often represented as a distinct species. This is not so, as no one has seen the doe of the spike buck. Sometimes there are two branches only without a pointlet, or there may be three, but I never saw more than four. The first growth horns are always small, and look diminutive on the crown in proportion to the size of the buck. In the second growth, or third year, they are nearly as long and large-looking as they will attain, but thinner and more slender; and in the third growth, or fourth year, they become as large as they are generally; solid and massive. Occasionally there may be five, or even

six spikes, and I have seen various spikes with one, two, or even three spiklets of them, giving a grand and imposing aspect to the antlered head. But this is merely chance, and may depend on various causes. Particular localities, seem to have a great influence. For instance, in the County of Bruce, deer are found with antlers having long, straight prongs, and generally five, with very few spikelets. There is first the frontlet, then three full spikes gradually decreasing in length, and the terminal spike of the main branch, making five pointed extremities. I describe this from a full grown head, at this moment on my table, and I may add that the lesser heads are also here. In the Counties of Essex and Kent, and along Lake Erie, horns are more spiked and have quite a different aspect from the more northern forms. Spring opens there two or three weeks earlier than in Bruce. The feed is very different. The soil is low clay, and the water stagnant, and surface water. In the north, the country is a rolling sandy soil, with magnificent rills, that come from pure limestone springs, and formerly there was not one of these but had numerous beaver dams all over them. Into these open spaces deer came, especially in the evening, to feed and get rid of mosquitoes, black flies, horse flies, *et hoc genus omne*; and I have been lucky to drop many a fine buck when in the beaver dams.

Now there is another point sportsmen seem entirely to overlook, viz: the singular effect of peculiar seasons on the size and proportions of the horns. This, Mr. Editor, is no imaginary matter, but a fact. I have observed for years that when there is a warm early spring, with plenty of good succulent herbage, that next fall larger deer are procured, with finer heads; altogether they are fatter and heavier. The reason is thus explained: In spring, when there is not much food, the deer are invariably emaciated, and they have to wander continually for it, consequently there is a corresponding consumption of strength, and a systematic weakening, requiring time to recuperate. This naturally retards the growth of the horns, and after they are fairly in the velvet form, a frosty night takes great effect on them. It seems to stunt their growth, and to a certain extent, inflame them. An old hunter in referring to a head I once had, said that when the horns were a particular size, probably a keen frost took effect on them. I knew this by the rough thick nubs on a particular part. I may mention, that these horns were small, but thick and massive with little elegance of shape.

It may be taken then, that a "Royal head," is a very vague idea, and simply means a magnificent head of horns. There is a foolish notion afloat, that a deer produces one spike for every year of its age, but what I have already stated is pretty nearly correct. You may also often see one horn with a spike less than the other. But there is no accounting for irregularities of this sort. All we can do is to accept facts. Again, the size of a deer has very little to do with the size of the horns. The largest deer I ever shot was a two year old, a spike buck, that weighed 212 lbs., and the largest and finest antlers were on a buck of 157 lbs., both clean meat, i. e., skin, &c., removed. I cannot account for it but it is true, that spike bucks are generally very much larger than other deer. For my own part I think it a pity to shoot deer in the rutting season, but the custom seems to obtain all over America. I would rather have a venison steak in the end of July, or beginning of August, than at any other season. The flesh is then very juicy and tender, and the full richness of the game is there. The animal has fully recovered from its winter's starvation, is plump and solid, with the new flesh well made, but it has not yet begun to lay on its autumnal layers of fat.

In Europe deer stalking begins on the 5th of July, and formerly it commenced in Ontario on the first of August. What practical use is there in putting it back to the first of September. The idea of destroying or "slaughtering" fawns in August is silly. Fawns are then quite able to take care of themselves; besides they are difficult to see and shoot on account of their colour and the thick foliage. Would it not be really more for the benefit of sportsmen to drop hunting on the first November, to allow the deer to rut in peace, and to commence stalking on the first of August. All other game are protected in the breeding season: why not deer? Another mode of hunting, I never practiced, was using hounds. This I look on as miserable pot-hunting, and the deer, when so driven by these brutes, are either exterminated on their run-ways, or chased from the section of country so hunted. How different a sport is stalking or still-hunting, which requires all the skill of the true sportsman to come on the deer, and then fairly bag his game by his own exertions. I have always been opposed to hounding and see no "sport" in hiding behind a cover and shooting down the poor animals that are bound away for dear life. I mention a fact, that at the last revision of the Ontario Game Act, using hounds in hunting deer was nearly pro-

hibited, and I wish it was. In Michigan, hunting deer with hounds has been totally prohibited, and not one pound of venison can be taken out of the State. Some American butchers came to Muskoka last year and killed and sent a large number of deer to their markets. Canadian Sportsmen should rise and protest against such destruction and unmanly slaughter. Will some other brothers of the gentle craft give us their opinions of these matters, not excluding "carpet" sportsmen. In conclusion, I may remark, that a "Royal head" was a term applied to the full-grown antlers of the Red deer of Scotland, which may yet be found in both England and in the wilds of Connemara, in Ireland, and it had twelve tines or spikes on both horns. Sir Walter Scott often mentions them, and in the "Fortunes of Nigel," a characteristic description may be found. King James the First, said he could die happy when he killed a buck with "twelve tines." I do not see how our common deer can have their horns compared at all to those of the majestic Red Deer of the Highlands. The Wapiti, or American stag, *Cervus Canadensis*, approaches very nearly to the Red Deer, and there is a great comparison between stag's horns and a common deer's. I cannot see how the term "Royal" can be applied to the Virginian deer's antlers, with any propriety.

J. H. GARNIER, M.D.,

Lucknow, June 23rd, 1881.

P.S.—One of your Correspondents, "Hammerless Greener," in your late issue amused me very much by a sly fling in a P. S., about my shooting robins. I do not retract one word I said about robins, otherwise, American Fieldfares, being a very dainty dish. Now, if "Hammerless Greener" is man enough to put his name to it, and write sensible remarks against a dish so much esteemed in the neighboring republic, I shall be glad to read gentlemanlike reasons of dissent, which would be preferable to a boyish sneer.

J. H. G.

NOTE.—We publish Dr. Garnier's opinions on deer's heads, although we cannot exactly agree with him. Doctors will differ, and it is possible that there are sportsmen who are not doctors who will disagree with his conclusions as to what constitutes a "Royal or King Buck." We have made the growth of deer horns a study for years; so did the late

Frank Buckland, who fully illustrated the Royal heads of European deer. We have had many opportunities of seeing and handling the heads of what are termed "King Bucks," belonging to the common deer (*C. Virginianus*). Instance the illustration at the head of Mr. Scriven's advertisement—that we take to be a "King or Royal Buck" head of *C. Virginianus*. We agree with our correspondent that the horns of all species of deer are variously produced, but independent of this fact, we can show a series of heads with horns of unusual or "King" typical form, and these heads are from different parts of the Dominion. We have on this continent three forms of *C. Virginianus*, all of which produce Royal heads, and when we compare these horns with the genus *Cervus* of Europe, then it is that we arrive at the conclusion that such are produced and they are termed here "Royal Bucks." Age has nothing to do with the growth. For instance, say that the nails on the doctor's fingers are not clipped for one year, they may probably grow the length of his fingers, and moreover take a spiral form. The argument that the growth is retarded by frost, is not natural, because the horns are fully grown, and there are not many bucks in the velvet by the end of September.

Since a portion of this note was in type, we received an addenda to the above letter from the doctor, in which he says that there is a great difference between the deer (Genus *Cervus*) of Scotland, and the common deer (Genus *Cariacus*) of America. We are perfectly aware of this, but the fact that they belong to two distinct genera does not disturb our theory that they are both liable to attain horns known as "King or Royal Bucks." A "Royal Head," although rare, is not typical but an abnormal form, occurring in all species of deer, and having said this much, we ask the opinions of others on the matter.—Ed.

J. H. G.—"The Canadian Naturalist and Geologist" is published by Dawson Brothers, 159 St. James Street, Montreal. The price of the vol., covering two years, is \$3 in advance.

We do not know the Montreal journalist referred to; we have no time to enquire if he is a "scamp" or not. You had better address Detective Cullen of this city, who will ferret him out and send the required information.

OUR FOREST TREES.

WHITE BIRCH ; *B. alba*.—This is the smallest of the birch trees, seldom attaining a height of over 30 feet. It grows with the pitch pine in the poorest sandy soils, and is fit to cut for fuel in ten years from the seed. Its wood is of no other value, as it is soft and decays rapidly.

COMMON ALDER ; *Alnus serrulata*.—A shrub or small tree, seldom growing more than 12 or 14 feet high and 2 or 3 inches in diameter. It abounds along water courses and in swamps, where its flowers are among the earliest harbingers of spring, sometimes displaying their tassels in the closing days of March. The wood, which is at first white and soon acquires a buff color, is chiefly used as fuel, and for making charcoal, to be employed in the manufacture of gunpowder. It is also taken for the hoops of small casks. Alder leaves are thought to have some medicinal value as an application to ulcers and to sore throats.

BUTTONWOOD ; *Platanus Occidentalis*.—Next to the white pine, the buttonwood or plane tree is the loftiest and grandest tree of New England. One which grew a few miles from Newport forty years ago, measured over 24 feet in circumference at one foot above the ground. On the Ohio river the buttonwood acquires gigantic proportions. In 1820 the younger Michaux measured a stock which at four feet above the ground, was 47 feet in circumference. When standing near water this species is noted for the rapidity of its growth, and has been known to attain the height of 80 feet in 20 years. For some years the buttonwood of the Eastern States have been subject to a malady, not yet satisfactorily accounted for, which has destroyed many of the finest trees and has affected the branches and leaves of many others. In the South-western States the buttonwood, known there as the sycamore, is still vigorous and healthy. Very little use in the arts is made of the wood of this tree, for although firm and of pleasing grain, it is very perishable and liable to warp. As fuel it has been pronounced of fair value.

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Extract from a letter received from Miss Fanny Jessup, Montrose, Alleghany Co., Pa.: "I have been using Parodee's Epileptic Cure for twenty months, and have been so much benefited by its use, that I wish everybody to know of it. I have two brothers, missionaries in Syria, and as there are a large number of cases in that country, they have written to enquire the price, &c."

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THE
CANADIAN SPORTSMAN
AND
Naturalist:

A MONTHLY JOURNAL.



MONTREAL, AUGUST 15, 1881.

Contents :

	Page.
Natural History in Schools.....	57
Leasing Salmon Rivers—The People's Rights.....	58
Anticosti.....	59
The Approaching Yacht Race.....	59
Montreal Amateur Athletic Association.....	60
The G. T. R. Boating Club Regatta.....	61
The Pointe Claire Regatta.....	62
CORRESPONDENCE :—	
Letter from Hammerless Greener.....	62
Our Forest Trees.....	63

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THE CANADIAN SPORTSMAN AND NATURALIST.

No. 8.

MONTREAL, AUGUST 15th, 1881.

Vol. I.

NATURAL HISTORY IN SCHOOLS.

We have had some experience in the way of explaining singular questions asked by young people relative to points of Natural History. The cause of this is easily explained. Books on Geology, Zoölogy and Botany, are generally expensive, and in many cases not within the reach of every ambitious young man or woman. We would advise beginners who are fond of zoölogical studies not to dabble in more than two branches of the science at one time. The study of Geology, Mineralogy and Crystallography combine and will not place the student in a quandary. The Mammalogy of this country constitutes a subject of great interest, and there are some instructive discoveries to be yet made, especially among the small rodents. The student who can take up this subject will find plenty of new facts to add to the present human knowledge. Ornithology and Oölogy go together, and although the natural history of birds have been pretty well worked up, still there is the interesting and almost new study of Oölogy from which it is probable to obtain many embryological features new to science. Again, there are probably some reptiles and fishes of whose æconomy we know little or nothing. We remember about thirty years ago communicating with the late celebrated Naturalist, Louis Agassiz, relative to a viviparous fish (*Cyprinoid*) which we discovered on the south side of Lake Ontario. A short time after this *Savan* discovered another species belonging to the same genus in California. Such instances alone should suffice to instill into the mind of the student acuteness and energy. By perseverance, many new things can be obtained. Moreover, it invariably occurs that the discovery of a new form is followed by that of another closely allied. It was only the other day that we had brought to us, a rare bat (*Vesperugo Novaboracensis*), a pretty little creature,

whose body is covered with reddish brown hairs. It was caught at Lancaster, Ont. The New York bat is rare in Canada; we took one asleep in daylight at Toronto, in 1846. It was suspended by its feet from a branch of a low tree, in the Hon. Mr. Allan's, Moss Park. This specimen was sent to the late Professor Agassiz, who informed us that the occurrence of this species at Toronto corrected a former statement of his regarding the geographical range of the animal, which was placed at a more southern latitude. The delightful study of Entomology in which great progress has been made of late years in the United States and Canada, can be combined with Botany, as it is necessary that the Entomologist should have some knowledge of the plants growing in his neighborhood. It is therefore important that these branches of Natural History should be taught in our Common Schools, at least the rudiments should be instilled into the minds of the young at a time when it can be enjoyed as a pleasant change in their daily exercises. We contend that a man cannot properly or intelligently fill the position of Judge, Barrister, Professor, Poet or Editor without some knowledge of Zoölogy. Many news writers can discuss and give clear and profound dialectics on subjects interesting to the general public in a secular way, but we believe that the additional knowledge of this nature would enable them to propound and elucidate matters which would produce the best results among the multitude. Why follow the old hum-drum system of education? The wide views of this progressive age calls for reform, therefore extend the advanced knowledge to the rising generation. Why should the systems of a semi-intelligent age be continued when better results can be attained? Give the young a knowledge of all new phenomena of nature that they may understand it, and become better men and women. Pay good

salaries to profound teachers who have a sturdy trust in their hands. Boys and girls at the age of twelve, are apt scholars, extremely inquisitive, and the information acquired by them at this age is productive of immense good. We believe before the expiration of five decades of time from the present, that the school system regarding Natural History will be as proficient as man can wish, and that towards the end of the century, many men will make grand progress in this noble science.

LEASING SALMON RIVERS—THE PEOPLE'S RIGHTS.

"The subject who is truly loyal to the Chief Magistrate will neither advise nor submit to arbitrary measures,"—JUNIUS.

One who glances over a Dominion map, scanning that portion of the coasts bordering both shores of the Lower St. Lawrence, will notice a number of rivers flowing into salt water. Several of these clear water streams are doubtless frequented by Salmon and Sea Trout. Gentlemen from Europe, the United States, and different portions of Canada have discovered the surface-fishing value of a few of these rivers, which are generally annually leased by the Fishery Department, that the lessees may derive the sole pleasure of fishing them. Of course, the Government claim the rivers, and have a right to demand a revenue from some of them, but we are informed that there is an exclusiveness in the system which the maritime people consider arbitrary. They say the man who is able to pay his dollar per day to fish with the rod for salmon should be allowed that privilege on any of the Nova Scotian and New Brunswick rivers. The Department sustains a staff of employes, as officers, inspectors, fish-breeders and guardians at good salaries, in order to look after all matters connected with these fisheries. This is a natural consequence arising from the leasing business, and may be well enough, provided it is made to pay. But the Government has a right to keep the people contented—to prevent the creation of ill-feeling—

to see that they are not debarred from a right which was not denied to them prior to Confederation. The men of New Brunswick are determined to claim riparian rights, and we are informed that dissatisfaction exists, especially in Campbelltown and neighborhood regarding these restrictions. Sportmen and residents on the Matapedia, Restigouche and tributaries, feel greatly annoyed that the Department should sustain monopolies, in preventing them from procuring local life comforts which they formerly enjoyed. We think the proper mode of settling this difficulty is to do away with leasing and appoint a resident guardian for each river. When the season arrives let this responsible man be at his post to arrange with the surface fishers, keeping a memorandum of every day rods are used. Of course the daily score will guide him. In this way the Government would satisfy not only the resident sportsmen, but the many visitors who doubtless would go there as heretofore, to spend money and enjoy themselves. When a gentleman pays for outfit, railway fare, hotel bill, gaffer, and one dollar per day for his fishing, the amount at the end of the season will be quite sufficient for the pleasure derived. The locality will also be benefitted by this change, because gentlemen who can have a chance of fishing at this rate will probably remain at the river's side longer than they do at present. This system would ultimately do away with a portion of the Departmental work, as well as saving the country about \$40,000 per annum.

The following supplement to the report of the Minister of Marine and Fisheries for 1880 has just been issued. It shows that the total expenditure in the Dominion for salaries and fish breeding for the year amounted to \$86,162 and the collections to \$19,423. The number of fish licenses granted was 4,334. The number of fishery offices in the outside service was 594. The total expenditure for fish culture, was \$29,109, and the number of young fish distributed is stated to have been 21,520,600. In the Province of Ontario, the salaries paid and the expenses of fish breeding was \$17,304, and in Quebec Province, 9,173. The collections in

Ontario for rents, license fees, fines and confiscations amounted to \$6,485, and in Quebec, 7,124. In the Montreal Division the number of fishing boats used was 1,152, valued at \$6,655. number of gill nets used was 1,032 and of seines 348. Quantities of fish caught during last season were as follows: 137,062 eels, 195 lbs. sturgeon, 230,400 lbs. trout, 3,100 dozen whitefish, 10,000 tommycod, 3,600 mas-kinonge, 1,050 barrels bass, 973 barrels pickerel, 975 bbls. pike, 15,305 bbls. mixed fish.

ANTICOSTI.

This island, situated in the River and Gulf of St. Lawrence, about 400 miles below Quebec, is not frequently visited by sportsmen, for a good reason, that there are but few localities on it where sport can be easily obtained by rod or gun. Many persons are led to believe that there are good salmon surface-fishing on Anticosti, because the Fishery Department advertises the leasing of its rivers every season. We have been two summers on the island, visiting the west and east ends of it. Certainly there are some very handsome and luscious salmon taken in nets which are placed in the bays, but as regards good fly-fishing for salmon, it is questionable, as the rivers are generally too shallow. However, the pools contain excellent Sea and Brook Trout. A few salmon enter the Salmon River on the North-east side; the Jupiter on the South side, and Chaloup also on the South-side. There is another river called River à la Loutre, a stream entering the sea about twenty miles west of S. W. Point, which is said to be frequented by salmon and trout; but the other rivers are not deep enough to allow salmon to enter, and are not worth advertising; in fact we question if the Department had a legal right to do so. The tides are an obstacle to the above rivers being ever good for salmon; the fish can scarcely get time to enter them. In some of the bays, although the river may be deep enough near the estuary, the tide is no sooner at its height, than it returns towards its base. There is a difference in the tidal time between the West and East portions of the

island, and this, with the fact that there is good estuary feed, may account for salmon being found around it.

THE APPROACHING YACHT RACE.

The failure of the Canadian built yacht, "Countess of Dufferin" to obtain the Queen's Cup, has not discouraged the Ontario yachtsmen from making another effort. The Bay of Quinte Yacht Club has challenged the New York Yacht Club, the holders of the "America" Cup. The Canadians are now building a sloop yacht at Belleville, Ont., to be named the "Atlanta," which will enter the contest. We are also informed that another yacht is being constructed at Cobourg, by Mr. Cuthbert, the celebrated yacht builder of Ontario. It is intended that she will compete for the Queen's Cup, which the Americans brought across from England, some years ago. The rules of the New York Yacht Club are peculiar and stringent, inasmuch as the prize can only be obtained by sailing on three successive days, and the holders of the Cup claim the privilege of sailing many different yachts in the race. Therefore the Canadian yachts will have to contend against the whole fleet of the New York Yacht Club. Of course, if we challenge our neighbors, it is with the knowledge that the rules of the American Club are to be complied with on our part, and if one of our vessels gain a victory under the circumstances, it will be another feather in the Canadian's cap. The flag officers of the N. Y. Yacht Club are dubious as to the sailing qualities of the "Atlanta," and the only vessel that can make a fair show against her, (the "Arrow") does not belong to a member of the Club. The owner of the latter yacht, Mr. Ross Winans is abroad, and therefore the vessel cannot be entered, as he must obtain club membership first. However, to make up for the "Arrow," said to be the fastest in America, Mr. David Kirby, the builder of the latter, offers to construct a vessel with finer lines, which in his opinion, can beat the

"Arrow." The new yacht will probably be called "Pocahantus." Details of her description and probable sailing qualities cannot be given, as they do not desire to inform the Canadians on these points; suffice to say that the new yacht will be three feet longer on the water line than the "Arrow," consequently she will be six feet longer on deck: these added lengths being aft. She is finer forward than Mr. Winan's vessel; her bilge in the wake of the fore channels being rounded off a bit, and it is thought she will run faster off the wind for this change. It was discovered that to windward the "Arrow" could not be beaten, but Mr. Kirby thinks the improvements in his new model, will not only equal the "Arrow," but that the "Pocahontas" will be easier on the helm, and a free runner before the wind. Her dimensions are 71½ feet on deck, 65 feet at the water line, 21 feet beam, and 7 feet 10 inches depth of hold. She is a centre-board sloop, her board being of yellow pine, 21 feet long, 9½ feet deep and four inches thick. It is fastened with about 500 lbs of iron bolts.

AN ENGLISH YACHT TO RUN.

For the first time in the annals of yachting an English racing cutter is to cross the Atlantic to try conclusions with the Yankee sloops, Mr. James Coates, of Paisley, intends to take his famous little ten-tonner "Madge" to America on the deck of one of the Anchor liners. Next week she will have some larger spars and sails than at present, to enable her to compete with the American sloops, all of whom have enormous masts and sails. "Madge" will be rated at about sixteen tons by the New York rules, and will have to compete with vessels quite double her tonnage. Two years ago Mr. Coates brought over from America one of the fastest sloops of her tonnage there, of about sixteen tons, with a Yankee to sail her, who on seeing "Madge" guessed he would beat that craft; however, "Madge" sailed round her in the first mile. Judged by that performance, "Madge" should have a good time in America. Mr. Coates deserves the best wishes of all yachtsmen for his sporting idea of showing the Yankees what our national rig, even when represented by a small boat is like.—*London World*.

MONTREAL AMATEUR ATHLETIC ASSOCIATION.

A GOOD CONJUNCTION.

It gives us pleasure to record the genial Association of the Lacrosse, Snow-shoe and Bicycle Clubs of Montreal. On the 25th of July, a special general meeting of the above Clubs was held in the Gymnasium to consider the Constitution and by-laws of the Association. Angus Grant, Esq., President, took the chair. Mr. Baylis, Secretary, read the proposed scheme to free the building from debt, which is at present \$12,000, but the Mercantile Library had about \$7,000 which probably could be obtained for the Association. The intention is to issue bonds without interest, to members of \$10, \$50, and \$100, to be paid off in ten years, by drawings at periods when the funds will allow. This was agreed to. The President then read the Constitution and by-laws, showing the objects of the Association, which are to encourage athletic sports, promote physical and mental culture among, and provide rational amusements for its members. Only amateurs are to be admitted on any account. The subscription to the Association is to be \$10; members of the Lacrosse Club paying \$7, of the Snowshoe, \$8, and of both \$5. Life members may be admitted on paying \$100; life members of the Lacrosse Club \$70; snowshoe \$80, both \$50. Full members who subscribe twelve years from now will become life members at the end of that time. There are to be nine directors, four from the Lacrosse, four from the Snowshoe, and one from the Bicycle Clubs other arrangements being made as other clubs are admitted to the Association. Members will be elected by the directors, after the names have been posted on the club rooms; if anyone objects to a name, twenty-five members can have a meeting called to decide, and one black ball in ten will exclude. Members whose subscriptions are six months in arrears may be expelled by the directors and be sued for the

amount due. Any member guilty of ungentlemanly conduct may be expelled by a two-thirds vote at a special general meeting. The building will be open from 7 to 11 a.m. on week days, and from 2 to 6 p.m., on Sundays. No gambling or betting allowed, and intoxicating liquors cannot be brought into the building under any pretence whatever. After full consideration, the Constitution and by-laws were agreed to.

Mr. A. STEVENSON moved a vote of thanks to the Hon. W. W. Lynch for taking charge of the Association's Bill and procuring the remission of the usual fee of \$100. He also mentioned Messrs. MCGIBBON and BOWIE as having given valuable help to the Association. The motion was seconded by Mr. STARKE and carried unanimously.

The PRESIDENT then made a few remarks, in the course of which he referred to the match of the 25th, as the best which had been seen in Montreal, and thanking the team for the victory they had won for the club. He then proceeded to give away the prizes for different competitions during the season, as follows:

Bowling competition—ten pins (handicap) C. J. Courso, 2,980, gold medal; J. L. Gardner, 2,845, silver medal.

Bowling competition—cocked hat—G. F. Corcoran, gold medal; E. C. Haviland and E. Busted, silver medal.

Billiard tournament (handicap) 200 points—4 balls, J. L. Gardner, 12 out of 13, gold medal; G. F. Corcoran, 9 out of 13, silver medal.

General proficiency—gymnasium—first class—C. H. Gwilt, gold medal; J. T. Barlow, silver medal; H. Fisher, silver medal. Second class—J. Patterson and R. Locke, silver medals.

Shooting competition—small target—200 yards, C. L. McAdam, Gold medal; M. Freeman and E. C. Haviland, silver medals; R. B. Ross, gold cartidge pencil.

Shooting competition—large target—100 yards, C. L. McAdam, gold medal; M. Freeman and R. B. Ross, silver medals.

THE G. T. R. BOATING CLUB REGETTA.

The sixth annual regatta of the Grand Trunk Boating Club, took place from Moffat's Island on Saturday the 6th instant. The G. T. R. Band played an excellent selection of music during the afternoon. The judges were Dr. T. A. Rodgers, Ald. Mooney, Mr. James McShane, M.P.P., and Mr. W. McWood; starter, Mr. A. Patterson; referee, Mr. Wm. Ross.

There was a fair wind, and towards the end of the proceedings plenty of rain, so the course was just as "lumpy" and unpleasant to spin over as could be expected. The following were the results:—

Double scull skiff, for boys under 17, two miles—1st, Anthony and Beattie, prize \$25 silver fruit basket, presented by Mr. F. R. Brown; 2nd, Berridge and Upton, \$6.00; 3rd Berridge and Riddell, \$3.

Single scull skiff, for club members—1st Henachine, prize Wallis Cup; 2nd, W. Morris; C. Girdwood, a good third.

Single scull skiff, for boys under 15, one mile—1st M. Patton; 2nd J. Anthony; 3rd A. Beattie.

Single scull shell, two miles—Won by Joseph Laing, prize \$25.00 cup; 2nd, L. Leroux, and R. Laing not a good third.

Single scull skiff, two miles, for members who never won a prize in any race—Won by J. Lovell, prize silver cup, presented by Mr. J. McShane, M.P.P.

Double Scull Skiff, two miles—Beattie and Morris, pulled a good race, and came in a good first; Ellis Brothers, 2nd; Morgan and Ogilvie fouled at the start and came in a considerable distance behind the second boat.

Consolation single scull skiff, two miles—1st, R. Laing, prize, cup presented by Mr. W. McWood; 2nd, C. Girdwood; 3rd, F. Moffat.

Climbing greasy pole—Some twenty boys who entered for this, afforded the spectators great amusement for a time. It is a long pole that has no end, and to some of the boys it must have appeared much higher than Jack's bean stalk, for they would not make an inch progress in ten minutes. Finally W. Turnbull made rope steps and was thereby enabled to reach the long coveted top of the pole.

Duck Hunt.—This would have been an amusing event had the duck been properly started. There was about forty entries, and at first the duck took a lively interest in the affair, but it

was held so long by the old gentlemen who was to give it its "sweet liberty" that its interest flagged, and John Myers soon captured it. Prize, \$2 and the duck.

The races over and the rain commenced, the main trouble was getting home; there was no shelter on the island and punts and skiffs were above par. It is to be hoped that at the next regatta better accommodation will be provided.

THE POINTE CLAIRE REGETTA.

The second annual regatta of the Pointe Claire Yacht Club, took place on the 6th inst., over the usual course and was very largely attended. The course being "choppy" and full of "white caps," sculling was rather a thing to be avoided than desired.

The first was the yacht race, for which the following craft entered:—

"Eolus"—Grenier and Brunet, St. Ann's; allows 3m. 12s.

"Waterwitch"—D. Lewis and F. Tracey, Longueuil: allows 3m. 24s.

"Oriole"—Wright and Raphael, Pointe Claire; allows 1m. 36s.

"Zephyr"—R. Barber, Pointe Claire.

"Petrel"—G. A. Campbell, Pointe Claire; 3m.

The "Oriole" came in first, "Waterwitch" second, "Petrel" third. The prize, a \$100 silver cup, is now the property of Messrs. Wright and Raphael; the "Oriole" having also won it last year. The winners receive in addition to the cup, a medal valued at \$10, presented by Mr. T. J. Claxton.

The boats which entered for the row-boat race were:—

"The Agnes,".....A. Ross, Pointe Claire.

"Frou Frou,".....D. Ducharme, Lachine.

"Alice," C. Thurston and Killaly, Lachine.

"Lottie,".....C. Houston, Pointe Claire.

The course was round the Dorval Light house and back, and seven of the boats were handicapped. The "Lottie" ran into Pointe Claire shortly after the start. When the light was made, and on the way in, while the "Frou Frou" and "Alice" were scudding along neck and neck, the former to the leeward, and the "Agnes" to the windward a short distance behind, the "Alice" capsized. Mr. Ducharme immediately lowered his sails and had his boat rowed to the rescue. The three men who were in the "Alice" were in the water for over an

hour, and were picked up by the crew of the "Frou Frou" after considerable trouble. A very high wind was blowing, at the time. The "Agnes" had a walk over the rest of the race. Mr. Ducharme entered a protest, and has left his boat at the Pointe, in the anticipation of the race being sailed over again.

The double scull lap-streak, won by Conway and Duquet, of Lachine.

Single scull lap-streak, won by Jno. Conway.

Canoe (two paddle) race—Messrs. C. DeB. Leprohon and G. Auldjo, of Lachine, won; Messrs. C. Nelles and Kohl, of Pointe Claire, second.

Tub race—W. Auchterlonie first, C. Holden second and G. Claxton third.

Correspondence.

To the Editor of the CANADIAN SPORTSMAN and NATURALIST:—

DEAR SIR,—I regret that my Postscript about shooting robins should have annoyed Dr. Garnier. I do not question the delicacy of a dish of robins, nevertheless, I adhere to my assertion that I never knew a sportsman who shot robins for pleasure or profit. I object to the killing of robins, because the male is a favorite songster, protected in Ontario by Statute. Robins and other insectivorous birds can only be killed legally by men on their own land, and then only when damaging fruit. There is an old tradition of the origin of which I am not aware, that the robin is "God's bird," hence by many held sacred. I differ with the Doctor regarding the hunting of deer. There is infinitely more sport in a shot at a buck while leaping and bounding through the forest, than at one standing still; and the signal music made by the hounds is itself exciting and worth listening to. If either kind of hunting deserve the title of "Pot hunting," it is, in my opinion, "Still hunting." One skilled still hunter in a favorable locality, will kill more deer in a given time, than three parties of five each can with dogs. I have hunted frequently with dogs for deer, and I never knew of a deer driven by hounds out of his beat on the first day, that could not (if alive) be found in the same neighborhood on the second day. In conclusion, let me say that my experience leads me to think that "spike-horned" buck and doe differ in appearance and structure from the branching-horned kind; they are lower in stature, with finer heads

and heavier bodies. The Doctor, however, is correct in regard to the number of prongs as not indicating age. A very old buck may be recognized by the corrugations at the base of his horns. I also coincide with him that a comparatively small buck may carry a large set of antlers. The heaviest set I ever saw is in my possession, and they were carried by an animal under 150 lbs. in weight. I differ, however, with the Doctor about the size of the horns of the red deer of Europe, as compared with the Wapiti or stag of the Rocky Mountains. No species of the genus *Cervus* carries such heavy magnificent horns as the Wapiti, which is a larger animal than the Scottish deer.

Yours truly,

HAMMERLESS GREENER.

Ottawa, July, 1881.

P. S.—A surveyor informs me, and in whose word I implicitly rely, that he found a pair of Wapiti horns in the North-west last fall which he set up with the top points together, and walked under them without touching his head. My friend the surveyor is six feet two inches high.

I have three very fine heads of deer stuffed in addition to the large one above referred to. One with long spikes, very wide set and lofty, from a buck of 170 lbs. Another quite wide also and beautifully formed, with a spike nine inches long on each side growing backwards from the main arms of the antlers. This buck weighed 200 lbs. A third set are very small and regular in shape; weight of deer 175 lbs. I have also another head from a buck killed by a friend of mine in the Madawaska River, two years ago, which weighed 250 lbs. The horns are of great thickness, at the base, with great breadth and length in the main branches, and few prongs. Their singularity, however, consists of an irregular and unnatural growth of horn very thick and massive at the root, extending from the right side of the head. This abnormal mass of horns, bears twenty-one points.

NOTE.—The bird commonly called a robin in this country, belongs to the genus *Turdus*; it is therefore a thrush. Our correspondent's remark regarding "God's bird," may possibly have arisen from the nursery legend where it is said that the European Robin red-breast covered the lost babes in the woods with leaves.

In regard to the deer, it will suffice here to say that there is only one species of *Cervus* occurring in Ontario, and that although specimens are occasionally found which appear to the eye of man as indicating difference of structure, that these peculiarities are not sufficient to make a species—the formula of dentition alone is what determines specific characteristics, and as these have not been discovered to vary in the "Spike-buck," all the Ontario forms are only one species called *Cervus (Cariacus) Virginianus*.

OUR FOREST TREES.

LOMBARDY POPLAR; *Populus fastigiata*.—This tree, once so extensively planted and admired for avenues and roadsides, has had its day. It is of no value for shade, and its numerous dead branches, even on young trees give it an untidy appearance. It was introduced from Europe.

POPLAR; *Poplar*.—A rapid growing tree, valuable for charcoal, and pulp which furnishes a large proportion of the stock for paper collars.

WHITE WILLOW; *Salix alba*.—This is also a native of Europe, but has been extensively planted in New England. It grows rapidly to a considerable height. In England it is valued for its timber.

WHITE ELM; *Ulmus Americana*. The graceful curvature of the branches of this tree distinguishes it from all others and it may well be called the favorite shade tree of New England. The elms of Boston common, of New Haven, and along the valley of the Connecticut River, are familiar emblems of majestic beauty. They are attractive even when the foliage is gone from the airy sweep of the branches and the feathered regularity of the spray. The elm bears transplanting and pruning better than any other forest tree, and is of rapid growth. Its wood from the peculiarity of the grain, is very difficult to work, but it is often used for making large ships' blocks and ship's floors. For the hubs of waggon and carriages, it is preferred to every other kind of timber. Some elms in Massachusetts, though known to be nearly 200 years old and generally hollow at base, are still in apparent vigor.

SLIPPERY ELM; *Ulmus fulva*.—Though commonly a much smaller tree, this bears a strong resemblance to the White Elm, but is not by

any means so abundant. Many trees have been killed by being stripped of their bark, which is in great demand for medicinal purposes. This inner bark is an excellent application for poultices, in affections of the throat and chest, and for dysentery. Flour made by grinding it, and mixed with milk is a wholesome and nutritious food for infants and invalids. The wood is thought to be even superior to that of the White Elm for hubs, and in the Western States, it is employed in the construction of houses.

HACKBERRY ; *Celtis occidentalis*.—This is usually a small tree ; but occasional specimens have been found nearly forty feet high and 24 in diameter. Its rough bark, angular limbs and very numerous branches give it the appearance of an oak. The dark purple fruit is very sweet with a large stone. It is stated that the wood of this tree is close, fine grained, and highly prized for shuttles.

WHITE Ash ; *Fraxinus Americana*.—This graceful tree rises in the forest to the height of 70 or 80 feet, with a straight trunk and a diameter of 3 feet or more at the base. On an open plain it forms a broad, round head of great beauty, and it is every where a favorite object of the landscape painter. The wood is white and remarkably tough and elastic. It is used for hoe and rake handles, for wagon shafts, oars, frames of carriages and for furniture. The leaves are effectually applied to mosquito bites, bee stings and even snake bites.

BLACK ASH ; *F. sambucifolia*.—The slenderest of trees, often reaching the height of 70 or 80 feet with a diameter scarcely over a foot. It usually grows in swamps, and will not thrive in dry situations. The wood is remarkably tough, and next to white oak it is preferred for the manufacture of baskets. For this purpose it is beaten with mallets until the fibre is somewhat loosened, when it is readily separated into thin ribbons. It is also used for chair bottoms, hoops and coarse buckets.

LILAC ; *Syringa*.—An ornamental shrub with hard, close wood.

ELDER ; *Sambucus*.—A coarse shrub, 4 to 6 feet high, bearing a broad cyme of white flowers, followed by small black berries, of which a tonic wine is made, while a sudorific tea is made from the flowers. The abundant pith is used in electrical experiments, and boys make popguns from the hollow shoots.

COMMON SWAMP BLUEBERRY ; *Vaccinium Corymbosum*.—A shrub from 4 to 9 feet high : in swamps and moist woods, the latest and best

of all the huckleberries. The wood is of no use.

WITCH HAZEL ; *Hamamelis*.—This tall shrub or small tree rises to the height of 10 to 20 feet. It has the remarkable quality of putting forth its flowers, which are of a showy yellow colour, as late as November, even while dropping its leaves. The wood is white, flexible and close grained. The Indians used the bark for poultices to allay inflammation, and an extract has been obtained from it which has some repute in medicine. The forked branches of this shrub were once believed by the superstitious to have, in the hands of certain men, a magical power in indicating the position of hidden springs or wells ; hence the name witch hazel.

CRATEGUS ; *Thorn*.—A shrub sometimes attaining the size of a small tree. Branches armed with thorns ; wood very hard ; would polish well.

PEAR ; *Pyrus Communis*.—This tree grows rapidly and forms a tall and finely shaped head. It therefore combines the valuable qualities of a fruit and a shade tree ; its wood is of reddish-white colour, heavy, firm and of a very close grain, and ranks next to boxwood for the use of the engraver. When stained black it makes a good substitute for ebony.

PYRUS MALUS ; *Apple*.—The wood of this well known fruit tree resembles pear wood in most of its properties, except that it is lighter. It is much used by the turner, and is made into shuttles and walking sticks. Apple-trees have been seen in Massachusetts more than 70 feet high.

MOUNTAIN ASH ; *Pyrus Americana*.—A small tree, seldom more than 25 feet high, of slender delicate proportions. It is often planted as an ornament to lawns, but its wood is of little value.

GARDEN PLUM ; *Prunus domestica*.—Cultivated for its fruit.

WILD RED CHERRY ; *P. Pennsylvanica*.—A slender tree, about 20 feet in height, and very abundant in New England, but on the Ohio River it ranks among the largest trees of the forest. The fruit though bitter has an agreeable flavor which it imparts to cherry brandy. The wood is of a light red color, growing darker and richer with age. It is close grained, compact, and takes a good polish. It is much employed for tables and other cabinet work, and compares well with the inferior grades of mahogany. The bark has tonic properties, which are of some repute with the medical faculty.

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THE

CANADIAN SPORTS AND NATURALIST

AND

NATURALIST

A MONTHLY
JOURNAL



VOL. II.

No. 1.

1882.

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THE CANADIAN SPORTSMAN AND NATURALIST.

No. 1.

MONTREAL, JANUARY, 1882.

VOL. II.

WILLIAM COUPER, Editor.

OUR NEW TITLE-PAGE.

Our readers will, no doubt, be pleased with the improvement which we have made in our Title-page. The design is by Mr. A. F. Dunlop, Architect, and the engraving by Mr. J. L. Wiseman, both of this city. The work reflects credit on the skill of the artists.

KILLING FISH BY DYNAMITE.

The residents of Indiana have been making use of the above explosive to kill fish. The shock destroys hundreds of marketable fishes, but at the same time there are thousands of young fish killed and allowed to decay in the water. The destructiveness of this method is so great that popular indignation should arise against it. We have been informed that the unmarketable fishes thus destroyed by dynamite in the White-water River, Ill., were seen floating in the river and its tributaries fully forty miles from the scene of the explosion. We have some knowledge of a similar experiment to kill fish in Canadian waters. The party who tried it, made the first attempt at Quebec. Americans to-day would call such a man "crank," and although we have frequently remarked "daft" moments in his dealings, he was determined and had energy as a fishmonger. The material had to be obtained to supply his customers, and as he could not procure sufficient by net process he thought of trying the dynamite one. On a beautiful summer's morning, he arose from his bed in Blanchard's Hotel, and taking a handsome trout rod in hand, proceeded to the Custom-house wharf, alongside of which lay a small trading schooner. The dynamite fish-killer tripped lightly on board the vessel, and having quietly adjusted the explosive to a line attached to the fishing rod, the experiment began; but the Skipper, who was in his berth,—hearing light

footsteps on board his craft—came forth from his cabin just at the instant of the explosion to find the schooner and himself thrown partially on the wharf. Of course the Skipper asked him "what you do there," but he coolly answered that "he was fishing," that a large fish took hold of his bait, and the line and a great portion of his twelve dollar rod were gone. The turmoil being over and the experimenter having quickly disappeared from the scene, the matter ended, but it must be remembered that he had an object in view and that was to discover if he could procure fish in large quantities by a cheap and easy process. This was his first trial with the dangerous article, and we cannot say that he tried dynamite again, but the intentions of this fishmonger were to dynamite the Trout Lakes of our Laurentide mountains, in order to procure large quantities of fish to supply the demand of the American market. He failed, however, as every man will, who uses unnatural or unlawful modes to catch his game. We have had accounts of large quantities of small fishes belonging to several species having been seen dead on the waters of Lake Ontario, and even in the Lower St. Lawrence, but no one has given a proper cause for the mortality. We are told that some years ago, the Norway Haddock (*Sebastes Norvegicus*) appeared in thousands opposite Metis, but they were all dead. Millions of Sticklebacks have been seen on the surface of the salt water in the Lower St. Lawrence, but what killed them is a mystery. Some attribute it to aqueous earthquakes producing sulphureous gases. Water may be poisoned in many ways; we know that lime when cast into the upper portion or source of a trout stream, will, in a short time, kill every fish in it. Fresh cut pine sawdust when thrown into a river, becomes disagreeable to fish, but this dust produces greater harm after it accumulates, for saw-

dust will go together even under water, and we have known instances on the Ottawa when the acid and pyroligneous carbon exploded in winter sending the ice into thousands of pieces.—C.

HATCHING SALMON.

The Government of the Dominion devotes a large amount of money annually for fish hatching, and a few men derive a very comfortable living from the business. But we doubt that since the hatcheries were erected the species of fishes hatched therein have increased to be of additional commercial value. What has become of the thousands of young fishes which were planted in Lake Ontario? Were any of them seen since? What have they produced? These are important questions to ask. The hatching establishment at Newcastle must make some kind of show, and the employees have to exhibit a little energy in order that the Government may see that they are working for their money. This is all very well if anything could be shown for the outlay. We say that nothing of apparent value has as yet been derived from hatching Salmon in Canada. On the contrary, the adult fish are taken from one river and killed to procure *ova* that other rivers may be stocked; yet the hatching of Salmon has been going on for years in the Provinces of Ontario and Quebec, and the fish are becoming scarcer year after year. This is pointedly the case on the south coast of the Gulf of St. Lawrence, where Salmon hatching houses are situated. It is true that there is too much netting and too many weirs set up in the tidal waters which are destructive to all marine fishes, and the Salmon have to suffer from these causes, but we deprecate against the evil mode in which adult Salmon are taken from their native river to procure material for the imaginary purposes of increasing the species. It is cruel, for the fishes are destroyed in the process, besides it is unnatural that Salmon should be planted in a river, the water

of which is disagreeable to them. Of course the Fishery officials will say that we know nothing about hatching Salmon. True, we have not been in the business but possess a knowledge of the operations. There is this argument however, in our favour, that is to say, it is interfering with a course of nature, which if allowed to proceed in the old way would doubtless show that it is wrong. The object of these fish-breeders may be to make new species by transporting and transmuting. They would like to make a new species of Salmon (in fact, that has been tried already; it however turned out to be old *Salmo salar* after all), but it is impossible, the process is not natural. Instead of changing the form or flavour or increasing the true Salmon, they are merely helping to produce deperdition, and we wonder that the system has been so long allowed. It would be far better for the Government and the country to devote a portion or all of the money expended on hatching fish, to make the rivers easy for Salmon to reach their natural spawning-grounds. Artificial fish-leaps should be made in several rivers along the North Shore of the Lower St. Lawrence. If such work was taken in hand, there are several rivers now almost worthless that could be made profitable, and the Fishery Department are cognizant of the fact. The late Rev. Dr. Adamson, published a pamphlet on this subject. We have spoken of it before, but the Department will take neither advice nor instruction from any man—not even a lessee of a river, who, in many cases, knows more about it than they do. To show the cruelty and destruction of the fish culturists, we here take the liberty to quote from the *St. John News* of August 1881, where the editor attacks Professor Hind's theory regarding the migration of Salmon. We have had the pleasure of knowing Mr. Hind when Professor of Chemistry in Trinity College, Toronto, and have read some curious statements in regard to his knowledge of Natural History since he removed to Nova Scotia; but it matters not, we

have some consideration for Professor Hind's investigations regarding the noble fish, and when he wrote of the migration of Salmon, depend on it, he was not far astray. His knowledge of Natural History cannot be pooh-poohed by any penny-liner. We also can vouch for the fact that sea-trout and brook-trout enter the upper waters of *all* Salmon rivers, for two purposes, (as they are parasites on their own genera), to destroy the eggs and fry of *Salmo salar*. The Salmon fry allowed to escape from the hatcheries in New Brunswick, have been devoured by trout immediately after being deposited by the officer. "F. L." a correspondent to the *St. John Telegraph*, makes this statement, and we can corroborate it. The system of netting the pools to supply the hatcheries with *ova* is destruction to the parent fish, as we find that it takes 500 females to supply *ova* for the first start of a single hatchery, and we are informed that there are four hatcheries at present operated in the Lower Provinces. Then, taking these at 500 each hatchery, it is requisite that 2,000 female fish are annually destroyed in the spring in order to keep these officials going; and besides, it is necessary that a certain number of males should be obtained to fertilize the *ova*. What a destruction of fish? which if allowed to pass up to their natural spawning-grounds, would in the true course of nature, produce more genuine Salmon than all the hatcheries in the Dominion. What cruelty? What waste? Now we have proof of what we say! We wish this business ended!! Are there no scientific men in Parliament? Cannot some one stand up for the rights of truth? If not, then farewell to our Salmon fisheries: farewell to the Salmon hatcheries; and farewell to the Fishery Department.—C.

SPORT AND SPORTSMEN.

What is "sport" and who are "sportsmen?" appears to be peculiarly defined by European and American writers. There is a vast difference between play and pastime for a consider-

ation, and diversion, or properly speaking the pleasure a man acquires when he turns aside from his every day duties to go off to the woods, prairies or marshes in search of game. A sportsman is a man of activity, fond of hunting and fishing, willing to pay freely for his privileges. He disdains unlawful acts and always has an eye on the pot-hunter. The gambler is not his companion; his associates are always gentlemen. Such a man is a true sportsman—a lover of legitimate sport. What then constitutes "sport?" It consists virtually in the relief of man from business confinement, that recreation may be obtained with rod and gun, in the woods, on the lakes or along the river banks. "sport" is what we call fair play between "man and beast;" and the man who stands by this motto will never feel ashamed of his position. It is said that Fox and Otter hunting constitutes "sport," and we have nothing to say against it, because they show fair play, and the chase does not arise from mercenary motives. Nothing of this nature has so far appeared among the Fox-hunters of Canada, and as regards the Otter its venation is not carried out here as in Scotland. It occurs to us that the word "sport" is not properly rendered. It is said to be "a diversion, pastime, jest, game or jingle," and it is evident that on the strength of this broad definition, editors of American sporting papers allow their columns to be filled with pastimes under the heads of horse and boat-racing, cock-fighting and other gambling jingles, games, jests, pastimes or diversions, none of which have a tendency to elevate mankind. We are not anxious to make the acquaintance of men who will publish and circulate this kind of literature; our aim is to serve a far higher type of mankind. We appreciate athletic sports—it is a grand idea of the young men of Canada to emulate the strong Roman—the youths who will perform on the cross-bar without the "bar," will eventually come out without a scar. The pastime of a young man devoting

a portion of his leisure to the study of Natural History is "sport."—we appreciate his enthusiasm when he enters the woods with insect-net in hand—he has no mercenary objects in view, but a love of study. The student of Geology, Conchology and Botany, and the man who rambles through the fields to procure something to instruct his brother does good and enjoys "sport." Then, in the name of all that is human, why should the word "sport" be associated with such unnatural proceedings as cock-fighting, killing salmon to take their progeny from them; injuring high-bred horses by racing, or gambling in any form, be encouraged in Canada.

The first volume of *THE CANADIAN SPORTSMAN AND NATURALIST*, the only journal in Canada devoted to the lovers of the rod and gun, suffices to illustrate what we intend to follow up, and despite whatever opposition we may receive hereafter from pseudo Canadian Sporting papers, the pages of our periodical will not be contaminated by productions that are not fit to be read by the most fastidious man or woman.—C.

THE INFLUENCE OF SPORT.

To those who are not in the habit of using the gun or fishing-rod it may appear strange that a certain number of their fellow beings have such a fondness for the pleasures of the chase. By some the amusement may be considered childish, by others cruel; yet there is, perhaps, no pastime more calculated to develop a manliness of character than the art of shooting or fishing as practised by a lover of these sports. That, which at one time was the principal occupation of our forefathers, has now become a popular diversion, indulged in by all classes from the peasant to the peer; royalty itself has not been proof against its attractions, and the pleasures of court have been forsaken for the excitement of moor. We need not wonder at the fascination which the forest has for the hunter, or the river or brook for the disciple of "Walton." The pleasures of cast-

ing for trout, or playing the noble salmon, afford opportunities for the display of more manly qualities than a novice is apt to suspect. Patience and judgment, as well as a certain degree of skill, are requisite to success; and who will say that these are not equally essential in other pursuits in life? A love of nature is usually combined with a love for sport; the wanderer in the forest becomes attached to her solitudes, he derives instruction as well as amusement from a contemplation of her works, while the prosecution of his sport affords him at the same time that invigorating exercise so necessary to the enjoyment of health.

WALLACE.

THE PETER REDPATH MUSEUM.

This handsome building which will be hereafter looked on with pride by the inhabitants of Montreal, is situated a short distance from McGill University, to which it is attached for museum educational purposes. The college collection of specimens, in a geological and paleontological view, are extensive, and when arranged in the new building, will be seen to advantage. The Carpenter collection of shells will also form a grand feature of interest both to student and visitor. Dr. Dawson, we are told, will add his own private collection, and a large donation of specimens will be added as soon as the museum is ready for occupation. Montreal will then have a thorough educational museum of Natural History, and the only one in Canada that can compare with some of the Collegiate Museums of the United States. It is expected to be open by the time the American Science Association meets here in August.

What will the Natural History Society of Montreal do when the Peter Redpath Museum opens free to the public? Will they be able to keep up their establishment on the present nominal public charge of admission, a small membership, and a poor government grant? We doubt if they can, and being aware that they were at one time willing to amalgamate

with the Fraser Institute, would it not be a good move on the part of the Council of the Natural History Society to make the same offer to the authorities of McGill University? By so doing, the collections in the Peter Redpath Museum would at once become most extensive, and doubly instructive, in fact the best on this continent. The Geological Museum at Ottawa could not make a comparison with it. We throw out this hint that the matter may be ventilated by those who are interested in it. Unless something of this nature takes place it is seemingly evident that the dissolution of the Society is merely a matter of time. The new museum is only a short distance from the old. The former will be visited by thousands of the inhabitants and visitors to the city, while the old Society must continue to charge for membership and the entrance of strangers. Then we say that the Natural History Society of Montreal should cast away its fossil condition and join an institution with some vitality in it.—C.

Correspondence.

ENTOMOLOGY.

To the Editor of the CANADIAN SPORTSMAN AND NATURALIST:—

SIR,—I have received the November number of your valuable journal, containing a very friendly and favorable notice of Transactions No. 2 of the Ottawa Field Naturalists' Club. In this review exception is taken to names of two weevils which are mentioned in my paper on Coleoptera, injurious to the Pine. The first complaint is that *Polydrosus elegans*, Couper, is given as *Scythropus elegans*, Couper, according to Crotch's revised Check List. As this list gives the *Rhyncophora* according to recent classification, and was issued under the supervision of LeConte and Horn, the blame, if any, of changing this beautiful beetle's generic name, must rest upon their broad shoulders. I may say, however, that in your description of this beetle (published in Canadian Naturalist, 1865,) you give it as *Poly-*

drosus? elegans, and at the close of this description add that LeConte does not think it a *Polydrosus*. As regards *Hylobius Stupidus*, Sch., my defence is equally simple. The species is given in the printed lists of the Entomological Society as found in Canada, and my beetles were named by careful comparison with a specimen so labelled, in the collection in possession of the Ottawa Literary and Scientific Society. This fine collection was arranged by Mr. Billings, with, if I mistake not, the assistance of Mr. Pettit and yourself. I have failed to find in THE CANADIAN NATURALIST your description of *H. pinicola*, or I should have compared my beetles with it. You state that it is strange that the species should lie dormant so long when such experienced entomologists as Mr. Billings and yourself collected together for three years around Ottawa. This certainly shows the beetle to be very rare, but does not prove its non-existence. I collected actively for three years without finding it, and have since obtained but three specimens. Mr. Fletcher during a similar term of years has not succeeded in finding one specimen. I hope shortly to have all undetermined and doubtful species named by competent authorities; until I am able to do so this beetle must rest in my collection as *H. Stupidus*.

W. HAGUE HARRINGTON.

Ottawa, 15th Dec. 1881.

NOTE.—I am satisfied with my colleague's statement regarding *Scythropus elegans*, Couper. If Dr. LeConte removed it from the genus *Polydrosus*, the matter is settled. I would, however, be pleased to have a five minutes' glance at *Hylobius Stupidus*, Sch., as at the time I described *H. pinicola* in Transactions Literary and Historical Society, Quebec, —New Series, part 11, p. 85, 1865—I remarked that another of the same size was found in Western Canada, but with marked difference in elytral characters. I had not the Western insect to compare with my Quebec specimen. *H. pinicola* is allied to *H. arcticus* of the other continent. I have no knowledge of *H. Stupidus*, hence the remarks which led to this correspondence. I was wrong in saying that I described *pinicola* in the Canadian Naturalist and Geologist, published at Montreal.—C.

DANISH SUPERSTITION REGARDING THE CUCKOO.

SIR,—Having admitted into your journal "The Legend of the Crossbill," and a controversy regarding the Robin as "God's Bird," I think the following may interest your readers:—

On the appearance of the Cuckoo (*Cuculus canorus*) in Denmark the village girls, in spring time, kiss their hands—addressing the bird when they hear its note—exclaiming, "Cuckoo, cuckoo, when shall I be married?" Then the old Danish folks, born down with age and rheumatism, repeat the words, "Cuckoo, cuckoo, when shall we be released from this world's care?" The bird continues to call "Cuckoo" so many times as years will elapse, evidently satisfying and dissatisfying many young and old regarding their peculiar wishes. But as some people live to a maximum age and girls may become old maids it is supposed that the poor Cuckoos are so much engaged in annually answering these superstitious people, that they have no time to build nests. Therefore, the eggs of the Cuckoo are deposited in the nest of the Hedge Sparrow (*Accentor modularis*.) R. S.

Montreal, December, 1881.

NOTE.—The female Cuckoo should, in accordance with the general nature of birds, be the nest-builder, and the male is only supposed to call "cuckoo." Our correspondent evidently writes the above to show that one European legend is as good as another. They are either childish or doting thoughts propounded from a want of proper education. We do not wish to have any more of this kind of matter. Give us something original.—C.

THE ACCLIMATIZED SPARROW.

SIR,—As a lover of birds, and being a friend to that pert little bird called the European or English Sparrow (*Passer domesticus*.) will you kindly insert in your valuable journal the following extract from the "Gardener's Chronicle," London, Eng., July, 1879, on the

USES OF THE SPARROW :

"We are sorry that Sparrows are still regarded as enemies by many of our village husbandmen; thus the overseers are yet empowered by the vestry meeting to pay one-half-

penny per head for all destroyed. It is a pity we have not yet learned more humanity, for without doubt this persecuted bird is one of the best friends both to the gardener and farmer. A calculation has been made that a pair of Sparrows destroy nearly four thousand caterpillars per week; besides other insects, while rearing their young. When Cockchafer (*Melolontha vulgaris*) abound, which happens periodically, they would speedily become a perfect pest but for the Sparrow. It is true the Rook (*Corvus frugilegus*) destroys an immense quantity, yet it should be remembered the despised Sparrow has access to gardens and other small enclosures where the Rook is denied access. The Sparrow fortunately does more for our house comfort, for he destroys one of our greatest pests, the common house-fly, which, were it not for his persistent efforts, would multiply to an alarming extent. Scarcely anything in the way of insect food comes amiss, for he is a voracious feeder. Therefore he should be regarded more as a friend than a foe."

P.S.—I believe since the above was written, the "Wild Bird's Act" protects the Sparrow. —R.S.

NOTE.—The Domestic Sparrow's habits have considerably changed since its introduction into Canada.—C.

A GENERAL DELUGE.

BY G. W. BROWN, M.D.

(Continued from page 96.)

On many of the islands of the Pacific are found traces of an ancient people who possessed an order of civilization closely resembling that of Oriental nations, as first revealed to us at the commencement of the historic period, and almost identical with those now being explored in Mexico and Yucatan, and similar to those of Peru in South America. These people passed away, as did the mound builders of our own country, leaving enduring monuments of their labors, which modern travellers look upon with astonishment, as they reveal a period of considerable advancement in the arts, and a knowledge of mechanics unknown to their degenerated successors. In support of this proposition, we make the following quotation from a newspaper article which we find floating through the press without credit, but fur-

nishing well authenticated facts of discoveries in the Pacific, a multitude of a similar character being within reach of the common reader:

"In the middle of the Pacific ocean, 3,000 miles distant from the nearest continent, lies Easter Island, abounding with remains of a remote antiquity, which have interested and perplexed a party of savants who recently visited them. This island is 40 miles in circumference, of volcanic origin, barren, no trees, destitute of resources, and inhabited by a few savages who lead the most miserable life imaginable. But upon this narrow strip of land so barren and unproductive, the explorer beholds a forest of gigantic statues, of the origin and beginning of which the race dwelling around know absolutely nothing. The smallest of these statues measured 30 feet, and a few attain the incredible dimensions of 50 feet. Some repose upon Cyclopean platforms; the greater portion of them wear crowns about six feet in height, which have evidently been placed upon these statues after their erection. The foreheads of the statues are retreating, and the mouths prominent, which indications may possibly reveal the race who constructed them. As regards the workmanship displayed upon them, it is rude and clumsy, although not destitute of character and expression. The questions concerning them presented for solution are: What do they represent? Whose handiwork are they? and how came they there? How possibly could this barren island have nourished a race of men capable of raising such monuments? Where is the race? What country do they still inhabit?"

It is well known to the antiquarian that Asia was originally populated by a black race, as is Africa in our day. These aborigines receded before the great Aryan wave which rolled down from the Northeast, driving before it the weaker, as do the same race with the Indians of America at the present time. They overran the great plains of Central Asia and made permanent homes in the valleys of the Tigris and Euphrates; thence spread eastward, intermingling with the already mixed population inhabiting Iran and Hindostan, while an advanced wave, pressed by those in the rear, crossed the Isthmus of Suez, and established themselves along the Nile. These parent waves spread westward and overran Europe, with colonies to Northern Africa, everywhere destroying the males and intermixing, forming varieties of races. In process of ages the same dominant race crossed the Atlantic, to repeat the barbarities of a remote age on the natives of this country, and to efface the link which connects all these with a submerged race over which rolls in majestic and solemn grandeur the deep and surging waves of the mighty Pacific.

It is well-known to geologists that animals whose habitat was in or near the tropical regions, and distant from which they could not survive, have been found embedded in ice in the Arctic regions north of Asia.* They were

so well preserved through the countless ages since their hyperborean imprisonment that their flesh was consumed by carnivorous animals now inhabiting those regions when a warmer sun melted their encasement. This fact of itself demonstrates that the polar regions were once approximating the equatorial; for these animals could never have wandered so far from the places of their nativity. It also proves that the change from a high to a low temperature was sudden, not leaving time between for animal decay to commence after the destruction of life, and the formation of ice, by which they were preserved.

Beds of most excellent mineral coal are found in Greenland, from where it is quarried and loaded directly on ship board of exploring steamers visiting those high latitudes. It is found out-cropping from cliffs at the very margin of the sea. Whether there is more than one stratum of such coal the writer is not informed.

Twenty-eight different beds of coal, superposed one above another, with varying thickness of intervening rock and slate, have been opened and worked in Great Britain. The lowest of these is more than 5,000 feet below the present surface of the sea. This tells us, with unerring certainty, that there has been twenty-eight epochs, each of indefinite duration, when those islands were alternately above and below the sea level; periods when the earth was covered with dense verdure; when the surging ocean rolled over it, and covered that verdure with sand and gravel, the material of which overlying rock was formed; when it again emerged; was again adapted to the growth of vegetation, and again, after the lapse of countless ages, went down, and so has continued until the present order of things was introduced.

What is true of the British islands in this regard, is probably true of every other island and continent on the globe. And this oscillating condition of the earth's crust will ever go on with seas and continents while the same laws which have governed matter as in the past shall continue. To-day a continent, covered with animal and vegetable life; to-morrow the ocean rolls its turbid waves over the melancholy wreck, leaving no trace of the toil,

*So fresh is the ivory throughout northern Russia, that, according to Tilesius thousands of fossil tusks have been collected and used in turning; yet others are still procured

and sold in great plenty. He declares his belief that the bones still left in northern Russia must greatly exceed in number all the elephants now living on the globe.—*Sir Charles Lyell, in his Principles of Geology, p. 81.*

anxiety and unbounded hopes of him who had delved to make it a satisfactory home for his ambition.

The present revealings on the surface of Greenland, where a few hundred years ago were green fields, waving forests, flowing rivers, populous and thrifty villages and a contented people, show only mountains of ice, all nature congealed, a country of desolation and snow. This change has been gradual, and the temperature is still declining.

Iceland, too, is slowly undergoing a similar change. At the same rate of decadence in another hundred years it will cease to be habitable. Already such portions of the population as have means are removing to the northern latitudes of America. The island, like Greenland, will soon be a cold and dreary desolation, to so remain until other changes shall transpire, when it may again, in a lower latitude, become the home of man; but ages of frost and ice must first mark its site; other lands in turn, now nearly tropical, must become frigid; and then it is questionable if any traces of man, even as insignificant as the stone axe or arrow head, shall remain to excite wonder or curiosity among those who shall delve in its soil.

While we can account for the gradual changing of the polarity of the earth and the shifting of climates—the glacial period always existing in some parts of the earth—we cannot, by the same mode of reasoning, explain why whole continents are suddenly submerged, or why the beds of oceans, as suddenly, become continents.

The equatorial diameter of the earth is greater than the polar by some thirty-four miles. While the centre of gravity remains as now the polar and equatorial regions will remain substantially the same; but if from any cause the polar shall preponderate, then a change in polarity will ensue. Such, without doubt, was the case when the tropical elephants were encased in the icebergs of Nova Zembla and Spitzbergen.

Mountains of ice are continually forming within the arctics. The heat of summer cannot reach them; but century after century, and age after age, the accumulation goes on, adding to the polar density. Some disturbing element as an earthquake shock convulsing the globe, a volcanic eruption and upheaval,

or the addition of some fragmentary planet or wandering body lost in space, which has been attracted from its orbit by its nearness to our earth, falls upon it, the equipoise is lost, and the waters of the ocean, seeking their plane, roll over their rocky bounds, engulf continents, and sweep away every vestige of aspiring man save the few favorable locations which accidentally escape the *general deluge* and the submergence of continents.

Such has been, such will be again and again the fate of the globe. Man beholds the traces of his labors all around him, finds everywhere, even deep down in the bowels of the earth, evidences of his great antiquity, and looks upon all as stable and enduring. He inquires of the pyramids, ascends their summits, wanders through their interior labyrinthian passages, and seeks to find the motives for their construction. He deciphers the inscriptions on their walls, and is astonished with the power and wisdom of those who made them. He finds their builders were interlopers from some other country, and at a very remote age. Human records fail to give the origin of these people, or the country from which they came. The antiquarian lends his aid. He finds the mounds and tumuli of America identical in general form, and evidently constructed for the same purpose, with those covering the vast steppes of Asia. The mounds are traced down the valleys of the Tigris and Euphrates, and a feeble idea of their magnitude is learned by exploring the ruined temple of Belus—the wonderful tower of Babel, of biblical story—on the site of ancient Babylon. As we follow the nomadic builders of those structures we overtake them in the valley of the Nile, driving out the native blacks, as they had already done in Asia, setting up a new civilization peculiarly their own, and erecting their mounds, towers and pyramids, each step of their progress marking an improvement on the preceding, the general idea and purpose of which their remote ancestors carried out with them from a continent which was gradually submerged, the inhabitants retiring before the incoming ocean. During the long periods of their journeying, resting for centuries by the way, and again advancing, they reached that region; foreigners on a foreign shore, where we first find them at the commencement of the historic age, making aggressive inroads upon the native populations of Asia and Africa.

(TO BE CONTINUED.)

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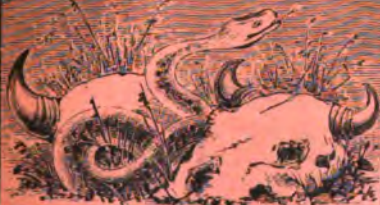
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No. 3.

MONTREAL, MARCH, 1882

VOL. II.

WILLIAM COUPER, Editor.

A COMPARISON OF THE GAME LAWS OF ONTARIO AND QUEBEC.

The growing scarcity of many of our game birds and quadrupeds is a matter of great interest to sportsmen, all of whom should unite in their efforts to prevent this diminution. That the extension of the period of our close seasons would be of great benefit, we do not think will be denied, and no true sportsman should object to a curtailment of his privileges, in this respect, when the object to be attained will ultimately be the means of providing him with increased pleasure. There is a marked difference in the protection afforded by the Game Laws of Ontario and Quebec, and the assimilation of some of the close seasons could not fail to be of benefit to this Province.

A synopsis of the Game Laws of the two Provinces shows the close seasons to be as follows :—

	ONTARIO.	QUEBEC.
Deer and Caribou..	15 Dec. to 1 Oct.	1 Feb. to 1 Sept.
Moose.....	do	do
Grouse Ptarmigan, &c.	1 Jan. to 1 Sept.	1 March to 1 Sept.
Wild Turkey and Quail	1 Jan. to 1 Oct.	
Woodcock.....	1 Jan. to 1 Aug.	1 March to 1 Sept.
Saipe.....	1 Jan. to 15 Aug.	1 March to 1 Sept.
Mallard, Gray Duck		West of Three Rivers
Black Duck, Wood Duck	1 Jan. to 15 Aug.	1 May to 1 Sept.
Other Ducks.....	1 May to 15 Aug.	East of Three Rivers
Swans and Geese..	do	15 May to 1 Sept.

Thus, in Ontario, Virginian deer and Moose are protected from 15th December, although the open season is one month later than in Quebec, the wisdom of this is apparent from the fact that these animals fall an easy prey to the hunter in winter, especially in the month of January, when the deep snow and the crust formed by the frost and sun, prevent their escape; the Caribou, however, from its lighter weight and the peculiar

formation of its hoofs is enabled to move very rapidly through deep snow, and is seldom run down by the hunter. Ruffed Grouse are protected from 1st of January in Ontario, while our open season extends until 1st March; the long winter affording the *habitant* an opportunity to try his hand at snaring, as he has seldom anything else to occupy him at this time of year. It is well known that the greater number of these birds with which our markets are supplied, are procured by this means, and it is hardly possible to obviate this, except by making winter a close season. Ruffed Grouse are very easily snared, and to the depredations of the market hunters alone, must the scarcity of these birds be attributed. The Fish and Game Societies of the Province of Quebec have been endeavouring to obtain an amendment to the Act for the Protection of Game, prohibiting the spring shooting of ducks. This is a much needed reform, as from a statement submitted by the Secretary of the Montreal Club, no less a number than 1000 brace of Black Duck were exposed for sale in the Montreal markets last spring. These birds, as well as Mallard, Wood Duck, &c., are protected during the spring in Ontario, and we cannot understand how our Government should tolerate such a destruction in the breeding season. If our legislators are not sportingmen, they should, at least, have a slight knowledge of political economy, and recognize that game is one of the resources of the country, which should be conserved like any other product. A bill to abolish spring shooting was presented last session, but owing to the opposition which it received, was withdrawn; we trust, however, it will not be abandoned and that when again presented, both parties in the House may unite in passing this much needed amendment. The great difficulty with all game laws is to secure their proper observance, especially in remote sections of the

country. If it were possible to prevent the snaring of Ruffed Grouse, the present protection would, no doubt, be ample; as it is, however, the *habitants* pursue their work of trapping unmolested, and the only feasible way of stopping this would seem to be by prohibiting the sale of these birds after a specified time; the law would not then be violated to such an extent as the market hunters would not be able to dispose of their game and would in consequence restrict their efforts to obtaining a supply sufficient for their own use.—WALLACE.

THE DESTRUCTIVE BRUSH WEIRS.

That there is cause for the decrease of Salmon along the shores of Nova Scotia, New Brunswick and the tributaries of the St. Lawrence, cannot be denied. They have steadily decreased in these waters since 1841. The blame for paying high prices for this wholesome food, must rest on the shoulders of the Government, who have allowed the inhabitants residing along the sea-board to erect "Stake or Barrier Nets" and "Brush Weirs." The "Stake-Net" is a Scotch invention introduced into Canada about the year 1818, and they have been found effective modes of capture, by intercepting the fish in their approaches to the rivers. They are formed of strong netting attached to "Stakes" driven into the shore, and these nets extend from high to low water mark; thus placed before the course of the fish on their way to the breeding grounds. The "Stake-Net" terminates in a chamber or trap from which there is no escape. The "Brush Weir" is more destructive; composed of wicker-work or brush-wood, it also has a chamber with a narrow entrance wherein all kinds and sizes of fish are caught at the ebb of the tide. These destructive traps are self-acting, working night and day. Although the fishery regulations require an open space to be made in the lower part of the chamber to be covered with net-work to

admit the passage of small fishes, the provision is defeated by quantities of seaweed and other floating substances which close the netting at every tide. We advise the Government to destroy every one of these wailing fences at once and forever. "Stake-Nets" should be absolutely abolished in the Lower St. Lawrence. In 1841, Salmon were abundant; 50,000 being the annual catch on one of the Labradorian rivers, and during the latter year, 1,800 Salmon were taking during one tide at Tadoussac. Other rivers along the Lower St. Lawrence were then equally productive, but the "Weirs" and "Stake-nets" extended rapidly, and since then Salmon, Shad, Cod, Herring, Striped and Sea-Bass have been annually destroyed by "Brush Weirs." These engines when first placed in Scottish and Irish waters, produced profitable returns to the Weir-holders; but, during this time, destructive results so far as regarded the propagation of Salmon. The British Government became alarmed, and a scientific commission was appointed to make enquiry as to the cause. The following is an extract from the Report of Sir William Jardine, one of the Commissioners. It speaks for itself.—

"In adverting to the evil done to the Fisheries by the use of these fixed barriers, and in pointing out the course believed to be indispensable to preserve what remains of these Fisheries, may be interfering with the gains of a few, who, in large estuaries or other favored localities, still reap a precarious harvest from their use; but I hold it to be due to the public that the destruction caused by the modes of fishing hitherto and still practised should be frankly indicated without regard to the private gains of any individual. There is no doubt that the longer these obnoxious Engines are permitted to exist the more difficult will be their removal. The instances in older countries of the destitution, the riots, the bloodshed and loss of life caused by these nuisances to fishing and navigation ought to be a warning to us."

Here in Canada, we have a Fishery Department which is cognizant of the fact that these "Brush Weirs" are annually a source of

profit to the owners; and, furthermore, it is aware that these traps destroy millions of young fish at every tide and no action has been taken to abolish them, or stop their increase. Why should this be allowed any longer? We have Salmon rivers in the three Provinces mentioned, which were heretofore unequalled on this earth,—rivers which by expending a small amount on each, would ultimately produce a large return to those who would lease them—that would be annually a source of large revenue to the country. We are determined not to lose sight of this subject, and shall keep the matter before the public until we see justice done. We call for the destruction of “Brush Weirs,” as they are the worst enemies of the young of fishes inhabiting the saline waters in the Gulf of St. Lawrence. They look ugly, adding no natural feature to a maritime view; are dangerous to navigation, and the sooner they are destroyed the better for the fish and the country.—C.

ORNITHOLOGICAL QUERIES.

The Sparrow Owl, *Nyctale Richardsonii*, Bonaparte. We want accurate information regarding the nest of this owl. Does it lay its eggs in a tree cavity, or on the ground? Has it been found nesting in Canadian forests south of the parallel of 50° north latitude? Mr. Vennor wrote to the *Montreal Witness*, some time ago, that he discovered its nest on the ground near one of our northern rivers.

The Saw-Whet Owl, *Nyctale Acadica* Bonaparte. The nest of this species has been found in Nova Scotia, but its nesting habits do not agree with the above Genus. Did anyone find its nest in the woodlands of Quebec or Ontario? The eggs of these two species are *desiderata* in Oölogical cabinets.

The Snowy Owl, *Nyctea nivea*, Gray. In accordance with the severity of the weather, this owl comes down to latitude 42° about the end of December, remaining about the fields and woodlands until the middle of February, if the temperature is mild. This bird has been seen in summer on the mountain regions on the Upper Godbout, where they are supposed to breed. We wish to obtain additional observations regarding the summer habits of this species.

The Hawk Owl, *Surnia ulula*, Bonaparte. Arrives about latitude 46° in October and November, sometimes in great numbers. We want some definite knowledge respecting the nesting localities of this species. Has its nest been found in Canada? Mr. Henry Reeks, F.L.S., an Ornithologist who remained two years on Newfoundland, says that it is, perhaps, the most common owl on the island, remaining there throughout the year. They occur abundantly along the southern coast of Labrador during the latter month, returning north as the weather moderates.

The Banded three-toed Woodpecker, *Picoides hirsutus*, Vieill. We have not yet noticed this bird in the Province of Quebec, but Mr. Reeks says that although not common, it is non-migratory on the Island of Newfoundland. We have found the nest of its congener *P. arcticus* on the 3rd of June, about two degrees north of Montreal; and, doubtless the nest of *P. hirsutus* may be obtained during the latter month in Newfoundland. Its discovery would be a rare prize to the Oölogist.

The Striped three-toed Woodpecker, *Picoides dorsalis*, Baird. I found one specimen of this species north of the City of Quebec, and it is probable that it breeds in the same latitude as *P. arcticus*. Can any Ornithologist give additional information regarding its summer habitat?

The Whip-poor-Will, *Antrostomus vociferus* Bonaparte. Occurs rarely in the Province of Quebec. I heard its call on a mountain adjacent to Lake Beauport, near Quebec, which is probably its most northern range. Has its nest been found in latitude 45°?

The Winter Wren, *Troglodytes hyemalis*, Vieill. Has the nest of this delightful songster been found in the Province of Quebec? Mr. Reeks says it is common, and a resident throughout the year in Newfoundland. I have seen it on Mount Royal in spring, but could not discover the nest. I saw it also at Godbout, on the Lower St. Lawrence in June, where it doubtless breeds.

The Red-bellied Nuthatch, *Sitta Canadensis*, Linn. This bird is common in our woods in spring; has the nest been discovered in New Brunswick, Ontario or Quebec?

The Hudsonian Titmouse, *Parus Hudsonicus*, Forster. This Titmouse appears in latitude 56° about the beginning of October, generally in company with the Genus *Regulus* and *Pinicola*. On the approach of spring, the Hudsonian Titmouse returns to high latitudes

to breed. Mr. Reeks mentions it as common, and non-migratory in Newfoundland and Audubon, I believe, was the first lucky man who found the nest of this species. A youth residing at Godbout discovered the second, last year. Who will find the next? Now, that Newfoundland, is to be traversed by the iron horse, many facilities will be offered to reach the *habitat* of this and many other rare northern species. We are anxious to hear more of this Titmouse and its nest, which is so elaborately described by Audubon.

The Pine Grosbeak, *Pinicola Canadensis*, Briss. Mr. Reeks tells us that this Grosbeak, is common in Newfoundland throughout the year. It must, therefore, bring forth its young there. It ranges south to latitudes 43° or, probably, further in severe winters. Has the nest been discovered in Canada, or did anyone notice the bird in our forests during summer?

The Semipalmated or Ring Plover, *Agialitis semipalmatus*, Bonaparte. This beach bird breeds on Newfoundland. Did any Oölogist find its nest of late in Canada? They bred during Audubon's time, on the north coast of the Lower St. Lawrence.—C.

MONTREAL BRANCH, ENTOMOLOGICAL SOCIETY OF ONTARIO.

The eighty-seventh meeting of this Society was held at the residence of the President, H. H. Lyman, Esq., on the 7th January last.

Mr. G. J. Bowles, read a paper, entitled "The Pickled Fruit Fly," *Drosophila ampelophila*, Leow, giving a description of this curious insect, illustrated by drawings under the microscope of the larva and pupa, and specimens of the fly. It is of the same genus as the well-known "Wine Fly," and has somewhat similar habits.

A letter from W. H. Edwards, of Coalburgh, Virginia, was read, enquiring about the forms of *Lycæna lucia* found at Montreal. Many specimens of the butterfly were examined, and the conclusion arrived at that the commonest form at Montreal, was not the type, but a variety, intermediate between the type and *violacea*.

A large collection of rare and beautiful Sphingidae and other Lepidoptera were exhibited by the President.

The eighty-eighth meeting was held on 14th February, at the residence of the Secretary.

Mr. G. J. Bowles, read a paper on the "Genera *Hepialus* and *Sthenopsis*," noting the capture here last summer of a very rare moth, *H. thule*, Strecker, only one other specimen of which is known to be in collections.

Mr. J. G. Jack, exhibited some large larvæ, supposed to be *Hepialidæ*, still alive in their tunnels, bored in the roots of swamp-maple.

The President communicated some interesting particulars regarding *Callimorpha* and other Bombycidæ, which he had gathered during a recent visit to the museums in Boston.

Several boxes of Lepidoptera were exhibited, and some species new to this locality noted.

Thomas Craig, Esq., and W. W. Dunlop, Esq., were added to the roll of the Society at this meeting.

ORNITHOLOGY OF THE ISLAND OF MONTREAL.

By ERNEST D. WINTLE.

(Continued.)

97. *Bubo Virginianus*, Great-Horned Owl. Autumn and winter visitant.

98. *Scops asio*, Mottled Owl. Autumn, and winter visitant.

99. *Otus vulgaris*, Long-eared Owl. Summer and winter resident; breeds here occasionally.

100. *Brachyotus palustris*. Short-eared Owl. Casual visitant.

101. *Syrnium cinereum*, Great gray Owl. A beautiful specimen was shot near the wheel-house on the 11th of February.

102. *Syrnium nebulosum*, Barred Owl. Autumn visitant.

103. *Nyctea nivea*. Snow Owl. Autumn, and winter visitant. One specimen shot opposite Nan's Island on the 11th of February.

104. *Surnia Hudsonica*, Hawk Owl. Winter visitant.

105. *Nyctale Richardsonii*, Richardson's or Tengmalm's owl. Winter visitant.

106. *Nyctale Acadica*, Acadian Owl. Winter visitant.

FALCONIDÆ (DIURNAL).—BIRDS OF PREY.

107. *Circus Hudsonius*, Marsh Hawk. Immature birds common. Adults very rare.

108. *Accipiter fuscus*, Sharp-shinned Hawk. Common.

109. *Astur atricapillus*, Goshawk. Rare visitant.

110. *Falco communis*, (anatum) Duck Hawk. Very rare visitant.

111. *Falco sparverius*, Sparrow Hawk. Not common.

112. *Buteo borealis*. Red-tailed Buzzard. Rare, 1 specimen shot in autumn of 1881.

113. *Buteo lineatus*, Red-shouldered Buzzard. Most common Hawk. Breeds in April.

114. *Buteo Swainsoni*, Swainson's Buzzard. Rare visitant.

115. *Buteo Pennsylvanicus*, Broad-winged Buzzard. Not common.

116. *Archibuteo lagopus*, Rough-legged Buzzard. Rare visitant in fall.

117. *Pandion haliaetus*, Fish Hawk. Rare visitant in summer.

118. *Haliaetus leucocephalus*, Bald Eagle. Rare visitant.

COLUMBIDÆ.—PIGEONS.

119. *Ectopistes migratorius*, Wild Pigeon. Not common. Spring and autumn visitant.

TETRAONIDÆ.—GROUSE, etc.

120. *Bonasa umbellus*, Ruffed Grouse. Abundant in food producing localities. Summer and winter resident. Nests in April.

CHARADRIIDÆ.—PLOVERS.

121. *Squatarola helvetica*, Black-bellied Plover. Spring and autumn migrant.

122. *Charadrius Virginicus*, Golden Plover. Spring and autumn migrant.

123. *Ægialitis vociferus*, Killdeer Plover. Not common. A few breed here.

124. *Ægialitis Wilsonius*, Wilson's Plover. Casual visitant.

125. *Ægialitis semipalmatus*, Semipalmated Plover, or Ringneck. Spring and autumn visitant.

126. *Ægialitis melodus*, Piping Plover, or Ringneck. Spring and autumn visitant.

127. *Ægialitis cantianus*, Snowy Plover. Rare visitant.

SCOLOPACIDÆ.—SNIPS, etc.

128. *Philohela minor*, American Woodcock. Arrives beginning of April; a few pairs remain throughout the summer and probably breed here.

129. *Gallinago Wilsoni*, Wilson's Snipe. Spring and autumn visitant.

130. *Macrorhamphus griseus*, Red-breasted Snipe. Spring and autumn visitant. Rare.

131. *Tringa minutilla*, Least Sandpiper. Spring and autumn visitant.

132. *Tringa maculata*, Pectoral Sandpiper. Spring and autumn visitant.

133. *Totanus flavipes*, Yellow-shanks. Spring and autumn visitant.

134. *Totanus solitarius*, Solitary Tattler. Spring visitant.

135. *Totanus melanoleucus*, Greater Tattler. Rare in spring; the young common in autumn.

136. *Tringoides macularius*, Spotted Sandpiper. Summer resident. Nests beginning of June.

ARDEIDÆ.—HERONS.

137. *Ardea herodias*, Great Blue Heron. Spring and summer visitant. Young common in the fall.

138. *Nycticorax nycticorax*, Night Heron. Summer resident. Nests end of May on Nun's Island, above Victoria bridge.

139. *Botaurus minor*, Bittern. Summer resident. Nests end of May.

RALLIDÆ.—RAILS, etc.

140. *Rallus elegans*, Fresh-water Marsh Hen. Summer resident. Nests beginning of June.

141. *Rallus Virginianus*, Virginia Rail. Summer resident. Nests beginning of June.

142. *Porzana Carolina*, Carolina Rail. Summer resident. Nests beginning of June.

143. *Fulica Americana*, Coot. Summer resident. Nests beginning of June.

ANATIDÆ.—GESE, DUCKS, etc.

144. *Branta Canadensis*, Canada Goose. Spring and autumn migrant.

145. *Anas boschas*, Mallard. Casual visitant.

146. *Anas obscura*, Black Duck. Summer resident. A few breed here in April.

147. *Dafla acuta*, Pintail; Sprigtail. Not common.

148. *Mareca Americana*, American Widgeon; Baldpate. Casual visitant.

149. *Querquedula Carolinensis*, Green-winged Teal. Spring and autumn migrant.

150. *Querquedula discors*, Blue-winged Teal. Spring and autumn migrant.

151. *Spatula clypeata*, Shoveller. Rare visitant.

152. *Aix sponsa*, Wood Duck. Summer resident.

153. *Fuligula marila*, Greater Bluebill. Spring and autumn migrant.

154. *Fuligula affinis*, Lesser Bluebill. Spring and autumn migrant.

155. *Fuligula Americana*, Redhead. Spring and autumn migrant.

156. *Fuligula vallisneria*, Canvas-back. Shot at Lake St. Louis in the fall.

157. *Bucephala clangula*, Golden-eyed Duck. Spring and autumn migrant.

158. *Bucephala albeola*, Buffle-headed Duck. Spring and autumn.

159. *Mergus merganser*, Merganser. Common in spring and autumn.

160. *Mergus serrator*, Red-breasted Merganser. Spring and autumn migrant.

161. *Mergus cucullatus*, Hooded Merganser. Rare during spring and autumn.

LARIIDÆ.—GULLS, TERNS, etc.

162. *Larus marinus*, Great Black-backed Gull. Rare during spring and autumn.

163. *Larus argentatus*, Herring Gull. Common Gull. Young birds occur during spring.

164. *Larus Philadelphus*, Bonapartes' Gull. Young birds occur in autumn.

165. *Sterna hirundo*, Common Tern. Spring and autumn visitant.

166. *Sterna supercilialis*, Least Tern. Rare spring and autumn visitant.

COLYMBIDÆ.—LOONS.

167. *Colymbus torquatus*, Great Northern Diver. Occurs in the St. Lawrence in spring.

PODICIPIDÆ.—GREBS.

168. *Podilymbus podiceps*, Pied-billed Grebe. Summer resident. Breeds here.

The above together with the interesting List of Birds, collected by Professor Macoun at Belleville, with notes by Professor Bell, of Albert University; published in "THE CANADIAN SPORTSMAN AND NATURALIST," in the November number of 1881, will, I trust, induce others to publish lists of birds occurring in their localities. Such records are valuable for reference, regarding the geographical range of the species.

Correspondence.

"CRACK" AND OTHER "SHOTS."

To the Editor of the CANADIAN SPORTSMAN AND NATURALIST:—

"It is generally the *mistaken* idea of those who are no judges of shooting, that if a man kills a certain number of times without missing, he is to be put down as a first-rate shot; and that another person, because he has been seen to miss, is to be considered as his inferior."—COL. HAWKER.

There is, no doubt, a large amount of charlatanism in the pretensions of a *sot-disant* "crack shot," an illustration of which I may superadd to the cases alluded to in your last impression. I knew a gentleman, in England, who was said never to miss a shot; and he never, or "hardly ever," did. But then his *modus operandi* was as follows: he rarely pulled trigger on a bird at a greater distance than from 30 to 40 yards, and he scarcely ever even aimed at a bird that flew away to the right. I refer now to Partridge-shooting, and I need not say, that a very ordinary marksman ought seldom to miss a bird flying straight away from him, or to his left, at 30 yards. I knew another gentleman, a distinguished sportsman, who, although an excellent shot, *did*, and not unfrequently, fail to bag a bird he shot at; but, *his* style was somewhat different. He had a keeper always at his elbow with a *seco d* gun, and, having brought down his birds, right and left, with the first, the second, one of Lancaster's No 9, with steel barrels, was placed in his hands, and he *often* bagged a second brace, *generally* a third bird, from one covey. An excellent test of accuracy of aim may be demonstrated in the Old Country by paying a visit, in a boat, to the caves with which the rock-bound coast of Kerry, Ireland, is indented, and which are the haunts of seals, of many varieties of wild-fowl, and Rock-pigeons, *Columba livia*. Send a man in a spare boat into one of these caves, and the pigeons, called also Sea-pigeons, will fly out with meteor-like rapidity; and to drop them as they wing their way *towards you*, will put to the proof the accuracy of your eye and the

steadiness of your nerves. How different and how superior this sport to the almost mechanical process of firing at the same birds from a trap. *Apropos* of trap-shooting, I once saw a number of school boys in a field, in England, some with guns in their hands, and some with baskets. I stopped to watch them, and found that they were about to engage in a pigeon-shooting match. A bird was trapped; the word was given; the trap was sprung; the pigeon was on the wing; a gun was discharged; and down came the bird, wounded, as I supposed, for it lay fluttering on the ground. To my astonishment, however, a boy ran up, seized the pigeon, and *trapped it again*. Explanation: the unhappy bird had a long slender string attached to its leg, and when it was not hit, it was *pulled down*, and submitted to another ordeal. Such is sport as some define the term! V. CLEMENTI.

Peterboro, February 20, 1882.

A BOY'S ENCOUNTER WITH A BEAR.

SIR,—The following true account of an adventure with a bear may be of interest to your readers. In August last, a boy about twelve years of age, living within seven miles from this place, started for the woods one morning in search of his father's cows. He had with him a shot-gun, and was accompanied by a dog; having entered the woods a short distance, the dog, which had hitherto kept close to his heels, bounded suddenly away and was soon lost to view. Thinking there was game ahead, he followed as fast as his short legs and the bushes would permit in the direction the dog had taken. On reaching a place where the undergrowth was thick and tangled, an animal rushed past him at a speed too great to enable him to see what it was; he then became alarmed and began to beat a retreat, and well he did so, for at this moment the ugly visage of a bear approached. Between fright, and a desire to get home, (just then,) the boy succeeded in reaching a more open space before Bruin caught up to him. He then turned around and as her ladyship raised to give him a fond embrace, the little fellow dashed the gun into her face, having forgotten in the excitement of the moment that it was loaded. This seemed to disconcert the bear a little, and the youth started to run in another direction, but was almost immediately pursued. Having to scramble over a large hemlock log, the bark gave way and he rolled over, being partly

covered with the debris. As he raised himself, Bruin stood above him, seeming quite surprised at his appearance; but, as he again started off, she gave chase, and had nearly overtaken him, when he took off his hat and threw it at her; this stayed her progress for a few seconds, and the boy took advantage of the delay by starting to climb a small ironwood tree, but none too soon: the first dash Bruin made for him as he was going up, left some ugly scratches on his boot. However he succeeded in reaching a limb about ten feet from the ground, over which he placed one leg. A short time afterwards, Bruin started up after him; and, although the tree was only about five inches in diameter, she succeeded in getting up beneath him. His free leg now came into use, and with all his force he kicked her on the nose and jaw; one unlucky aim, however, sent his foot into her mouth, but she only succeeded in tearing off a portion of the boot with which she descended to the ground, where she thoroughly examined her prize. After this, she proceeded to climb an adjacent tree, the trunk of which leaned in the direction of the one in which the boy was placed. She soon reached a point almost over his head, about twelve feet from him. Fearing she would drop down, he lowered himself to the ground, but was again obliged to ascend, as Bruin came down also. This operation was repeated several times, and it is uncertain how the adventure would have ended, had the boy not succeeded in attracting the attention of a man working in a clearing near by, whose arrival, with his dog, caused the bear to move away. On arriving home, the canine companion of the boy was found with the skin torn from one side of his face. The dog must have been the fleeing object that passed him just before he encountered the bear, and her persistency in following the boy, may be attributed to being enraged beforehand.

R. B. SCRIVEN.

Gravenhurst, Ont., 8th February, 1882.

THE PILEATED WOODPECKER.

In No. 12, Vol. I, you ask your readers for information regarding the nesting habits of (*Hylotomus pilatus*.) In reply to this query, let me say that the nesting habits of this species, differ little from those of the most common of the Woodpeckers; except that the

cavity which it forms for nesting, is of course larger, and generally in a large tree, deep in the woods and high off the ground. I have seen several trees which at different times contained the nest of this species, though I have not obtained the eggs. More than twenty years ago, when I was a boy, residing in the township of Peel, and while engaged in sugar making, I noticed a pair of these birds at the work of nest building, in the trunk of a large beech tree about fifty feet from the ground. This, was, I think, in the latter part of April. In May, the female was hatching, for when the tree was struck with a stick, she would dart out and shortly afterwards return to the nest. In June both birds were constantly seen going in and out of the nest, evidently attending to the wants of the young. While the female was incubating, the loud call of her mate might often be heard in the vicinity. Afterwards in the winter season when the tree was chopped down, I examined the cavity, and found it large enough to contain the body of a grouse. Among the early pioneers this bird was called the "Woodcock," and not until, in after years when I began to study the works of Ornithologists, did I know the true Woodcock to be a very different bird. This bird is the most retired and solitary in its habits of all the Woodpeckers; and, but for its loud, monotonous and exciting call, would scarcely be known to exist. This "outburst" is occasionally heard resounding through the dark pine and hemlock woods, while the feathered hermit is on the top of some lofty tree in the depths of the forest. The call is sometimes heard in mid-winter as well as in the summer season; but it is most frequently heard in early spring or late in the fall, and is by some supposed to indicate a change of weather. The favorite habitat of this bird is the high rolling, hardwood forests, where there is an intermingling of evergreens and the sound of rushing waters and though it may occasionally feed on seeds, fruit, &c., yet its chief food appears to be the larger species of insects and worms which it procures from the bark and trunks of decayed trees. When two of these birds meet—as they sometimes do—while in search of food, on the trunk of a large tree, especially an old hemlock or pine, they soon strip it of its bark and leave the giant of the forest a monument of their strength and industry.

NATURALIST.

Listowell, Ont., February 3, 1882.

A GENERAL DELUGE.

(Continued from page 104.)

The American continent bears unmistakable traces of a race who lived contemporaneous with those people. They, too, were mound, pyramid and artificial lake builders; they were sun-worshippers, as were those who reached Asia, and, like them had their idols, to whom they made animal and human sacrifices; they faced the east in their worship, and buried their dead looking the same direction, and each had a large array of priests who administered to their gods; each employed ornamented funeral urns in which they deposited the ashes of their worthy dead, and each used the phallic emblem in the same manner. In short, each were parts of the great wave of humanity, going out of a common centre, one rolling eastward, the other westward, to escape a then impending calamity. Each had similar features† and similar forms of expression; each carried forward a similar civilization; each had made similar advances in mineralogy; each employed the now lost art of hardening copper for stone-cutting, and used the precious metals for ornamentation. And, to climax the whole, each had a written language‡. Famine, pestilence, and exterminating war, an overwhelming ocean wave, or some other direful calamity swept all away. His labors only remain to tell that he has been. Savage man, from some

†In an excavation made in the lower stage, or esplanade of the principal mound, I found embedded in the walls of the cut, and so firmly fixed in the wall that it was with difficulty extracted, the head of an idol with Asiatic features. * * It would be of thrilling interest to be able to ascertain how the conception of the Asiatic face originated.—S. B. Evans in his letter of May 25th, 1881; to the Chicago Times, describing his visit to the pyramid of Cholula, Mexico.

‡Their monuments indicate that they had entered upon a career of civilization; they lived in stationary communities, cultivating the soil and relying on its generous yield for support; they clothed themselves, in part at least, in garments regularly spun and woven; they modeled clay and carved stone, even of the most obdurate characters, into images representing animate objects, including even the human face and form, with a close adherence to nature; they mined and cast copper in a variety of useful forms; they quarried mica, steatite, chert and the novaculite slates, which they wrought into articles adapted to personal adornment, to domestic use, or to the chase; they collected brine of the salines into earthen vessels, moulded in baskets which they evaporated into a form which admitted of transportation; they erected an elaborate line of defence stretching for many hundred miles, to guard against the sudden irruption of enemies; they had a national religion, in which the elements were the objects of supreme adoration; temples were erected upon the platform mounds, and watch-fires lighted upon the highest summits; and in the celebration of the mysteries of their faith, human sacrifices were probably offered.—Foster's *Pre-Historic Races of the United States*, pp. 350 and 351.

(To be continued.)

less favored region, gained control, and intruded his dead into the mounds and places of sepulchre of the lost, and now, so far as America is concerned, wholly extinct race.

The antiquarian and scientist, and the theologian as well, should cease investigations among the ruins of Asia for the birthplace of humanity, but such may, with profit, find a perfect resemblance between ancient Asiatic and American civilizations, and almost demonstrate that the latter is coeval with or antedates the former by thousands of years; that the western is quite as old as the eastern hemisphere, and that here has been wrought changes of which the human mind has but a feeble conception; that the marks of an ancient and advanced civilization all around us give indications of still older ones which cycles of submergence and emergence are ever developing to observing man; and which, if human records could be preserved through all the mutations of time, would ultimately reveal much that at present is concealed from the earnest investigator.

In a preceding article we stated that even scientists, had claimed too brief a period for the age of the earth. A hundred thousand years leave but trifling changes on the earth's surface, when the vast whole is taken into account. A portion of a continent may be engulfed and another may emerge from the ocean; new islands may appear, or seas be drained, but the general appearance will remain the same. The changes are not so marked or frequent now as during earlier periods, when the internal heat was greater, the surface thinner, and the shock was more universal.

Geologists, as if fearful that a statement of the long period which has elapsed since the earth was a molten incandescent mass, revolving on its own axis, as well as round the sun, carrying with it several satellities, all of which, save the moon, have been completely swallowed up and lost in the parent earth, are content to demonstrate the thousands of years which would be required to silt up the valley of the Nile; to show how vast a period would be required for the Ohio, Mississippi and Missouri, and the tributaries, to fill up an arm of the ocean from Cairo to the Gulf of Mexico; to abrade the rock of Niagara and form the mighty chasm, more than two hundred feet in depth, and seven miles in length, through which flow the waters of the great lakes on their way to the ocean; or to build up a chalk cliff nearly a mile in height, as found in England, from minute shells of microscopic animalcules.

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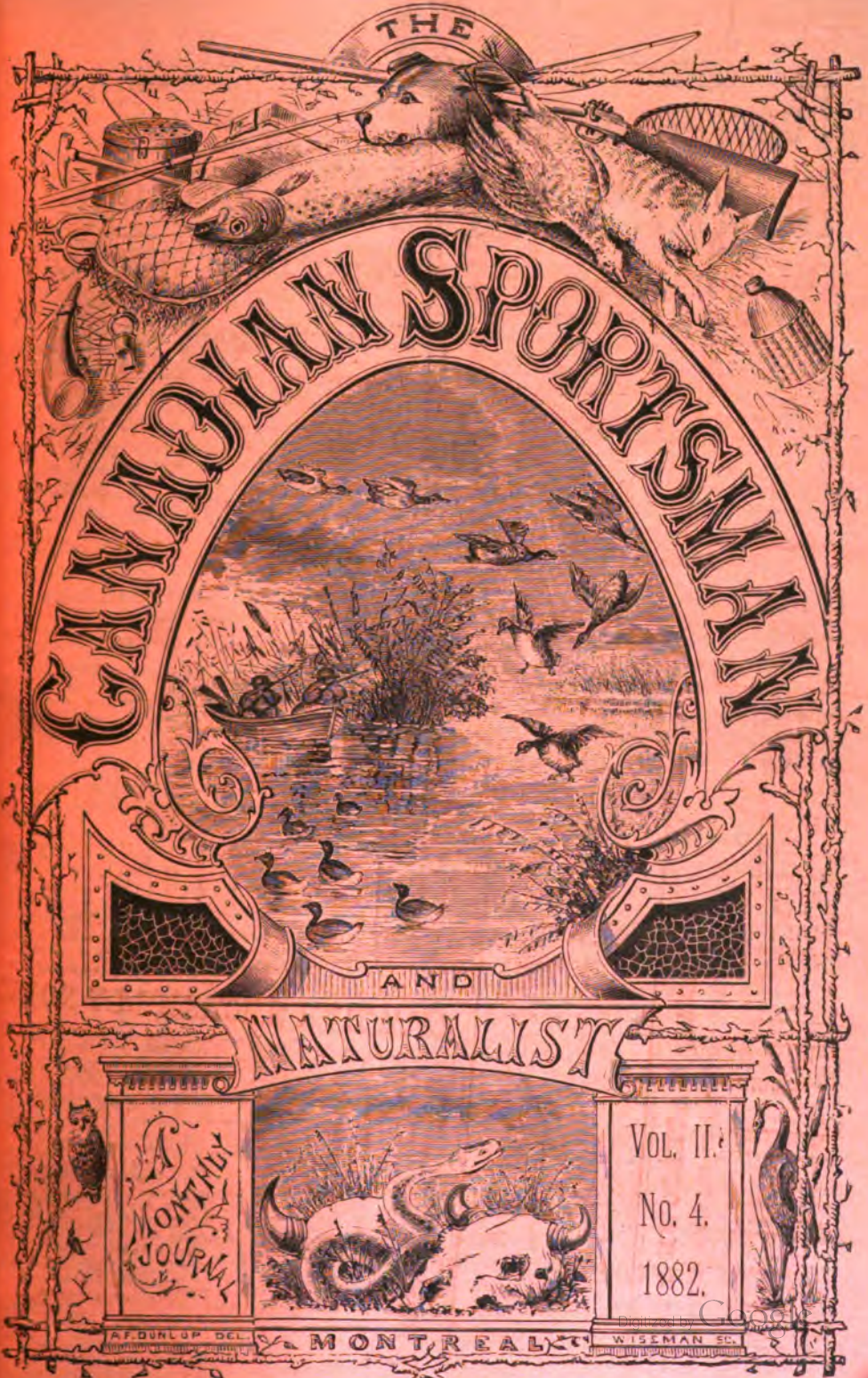
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THE CANADIAN SPORTSMAN AND NATURALIST.

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Vol. II.

WILLIAM COUPER, Editor.

 IN ORDER to dispose of an accumulation of matter, we have increased the number of pages in our present number. This enlargement we would like to retain permanently, and trust that before the end of the present volume, our subscription list will have increased to such an extent as to enable us to do this without suffering pecuniary loss. We have had many difficulties to contend with—much doubt expressed with regard to our longevity—and some fault found with the limited form of our publication. These difficulties have not proved insurmountable. Our subscription list has steadily increased. We have endeavoured to profit from the well-meant criticisms of our friends, and have quietly ignored the forebodings of those who did not predict our success. We now ask the co-operation of our subscribers—of all lovers of field sports and Natural History—and with this assistance, in a country so extended as the Dominion of Canada, and in which there is such a diversity and abundance of sport, we feel quite confident of the prosperity of the CANADIAN SPORTSMAN AND NATURALIST, which we claim is the only publication in the Dominion, devoted exclusively to legitimate field sports and the Study of Nature.

WHY ARE GAME ANIMALS BECOMING SCARCE ?

When Bartram, Audubon, Bachman, Wilson and Bonaparte wrote on American Natural History, the quadrupeds and birds which are classed as game on this continent, were then abundant. The above writers had no difficulty in obtaining material to describe and illustrate their works. But a gradual change has been going on as regards the abodes of American animals. Man, in opening up the soil, destroys

or presses back almost every wild animal inhabiting his immediate woodlands and lakes. The aborigenes are no exception, as many of us now living, can remember. In 1842, Indians were settled on the North shore of Lake Ontario; one tribe called "Credit Indians," were frequently seen at that time selling their wares in the streets of Toronto. Their stay was of short duration in the neighbourhood of whiskey and the white man—being compelled to seek another *habitat*, they gradually disappeared—the weaker *homo* had to succumb to the stronger. In like manner, combined with the achievement in the forms and use of heavy arms of late there is also a visible force pressing on the wild animals from their former haunts in prairie and forest, and in order that they may retain their balance amongst the native *fauna*, they, like the weak aboriginal tribes, have also to retreat to new localities to find a subsistence. In 1842, many of the large Canadian marshes were teeming with geese, duck, snipe and plover indigenous to the country. Toronto marsh was then a good shooting ground, and many birds which regularly visited it at that time, are considered of rare occurrence to-day. A large Black Bass (*Huro vulpes*, Agassiz,) then had its *habitat* in Ashbridge's Bay, and many a fine 20lb. fish of this species did Joe Lang spear in its surrounding marshes. But there has been a change; the building of the esplanade forced back the water in Toronto Bay, resulting in a breach in the sandy peninsula opposite, therefore destroying the old marshy grounds lying east of the city, thus finishing the historical hunting and fishing resorts of Toronto sportsmen. An increasing rural population annually clearing the woodlands, and the extension of railroads are powerful agencies to frighten and cause the removal of wild animals, which, at

one time, were common in our immediate forests. The Moose and Virginia Deer will not remain long in proximity to civilization, and it is a fact that these species each successive season move towards higher latitudes. It is therefore probable that ere many years pass away, the hunter, in order to obtain venison, will have to travel to the extreme northern edge of the Canadian forests to find his game. There is an American cry at present against a few English gentlemen, who occasionally visit the Western regions of the United States in search of large game. They are accused of wantonly destroying Rocky Mountain Elk (?) Shooting the animals down for the mere pleasure of afterwards boasting of the circumstances. Now, we cannot comprehend the reason why an old sporting paper like *Forest and Stream*, should mislead its readers by stating that Englishmen journey so far for the sport of shooting Elk, when they can procure them in some places in Canada or Maine. An editorial in the same paper says that Moose are not abundant in the Rocky Mountains or valleys adjacent thereto. There is something wrong here, and the zoological writer in *Forest and Stream* would do well hereafter to adhere more closely to the nomenclature of the Michigan Sportsmen's Association. No true sportsman, especially an English one of means, will remain silent without demurring against a false charge of this nature, and it is evident that the object of making it, is to further the interests of Western skin hunters, who are jealous of the visits of good marksmen, who go there, not for mercenary purposes, but for pure sport. The people inhabiting the Western portions of the United States, where large game occur, should certainly make stringent laws to protect the animals, going so far as to compel every man to procure a license to hunt in the regions of the Rocky Mountains. If this is not done, the Wapiti (*C. Canadensis*), the Elk of *Forest and Stream*, will ultimately be exterminated, and the Buffalo (although not considered game) ere many years pass

away, will also be classed among extinct quadrupeds of this continent. In our own Great North-west Territories, at present, the richest sporting grounds in America, the advance of the white man will eventually produce the same changes in the *fauna* of that region which have been alluded to above. The lakes and ponds of the vast prairie lands for centuries past and the breeding-places of many species of wild water fowl, will, as man surrounds them with his habitations, be thoroughly deserted, and the birds, like the poor Indians, must find more retired places to produce their species. Such then is the Natural History view to be taken of the advance of civilization westward. Every animal of a wild nature will have to retire before it. That there is plenty of space for their removal, there is no doubt, but there is a limit to the northward progress of some quadrupeds and birds, many species of which cannot subsist in high latitudes. Then, anticipating a large annual increase to the present rural population in the North-western portions of Canada, the results which are now spoken of regarding a change in the *fauna* of that region, will certainly take place. Where will they go to be undisturbed as they were before the recent encroachment of man on their domain? This is a question of interest to the sportsman and naturalist. Any person reading Audubon's visit to Labrador, and who will take the trouble to follow his footsteps on the latter coast, as the writer has done, may see the changes which have taken place there. In fact, one reading his description on the spot where he found a species of bird breeding on that rocky shore, would pronounce the statements fictitious, as no nests of the kind are found there at this day. Man appeared and settled in the neighbourhood, and the birds have removed for safety to more secluded places.—C.

THE NIDIFICATION OF NUTHATCHES.

Eminent Ornithologists have described the nesting habits of these birds as similar to Woodpeckers, the nest being formed by

excavating a hole in a decayed tree or stump. Audubon mentions having found in Maine, a nest of *Sitta Canadensis*, which was dug in the decayed wood to the depth of fourteen inches. Coues, in his "Birds of the Colorado Valley," referring to *Sitta Carolinensis*, states, "that it regularly digs a hole for itself, both sexes working assiduously till an excavation, it may be fifteen or twenty inches deep, is prepared for the reception of the nest." The European Nuthatch appears to nest differently, according to Morris "the nest is placed in some hole in a tree. If the entrance is too large, they narrow it with clay, until it is of the right width." Now, if all these descriptions are correct, we find a wide difference in the nesting habits of our Nuthatches and their European congener.

My observations have, so far, been confined to *Sitta Carolinensis*, three nests of which I have taken during the past five years, none of which were in holes formed by these birds, but in natural cavities, in living trees. From these observations I would suppose a natural cavity, or the deserted nest of some woodpecker, or squirrel to be the place usually selected, and that these birds never, or "hardly ever," dig a hole for themselves. The following extract from my note-book refers to the last nest taken.

Returning from a visit to a sugar camp in the spring of 1878, I heard the cry of a pair of Nuthatches, following in the direction of the sound, I soon perceived the birds and was not surprised, even at this early season, to find that they were making preparations to build. One of the birds had in its mouth a large piece of downy looking material, with which, after a short time, it flew to a neighbouring tree and proceeded to the spot selected for the nest. This was a round knot hole, overgrown by bark, and about four feet from the ground. I ventured to peep in, but all was darkness within, and as I did not wish to disturb the birds, retired, to observe them from a distance. For several days both male and female were busy carrying material for the nest, after which I did not see them for some time, as after completing the nest they apparently retired to some secluded spot, no doubt to complete their nuptial arrangements. On the 20th April, with mallet and chisel in hand, I again went to the tree and on looking down into the cavity could see the female on the nest. The hole, though sufficiently large to admit a bird of greater size than the Nuthatch, was too small to allow me to insert my hand. Before pro-

ceeding to enlarge it, I knocked vigorously on the tree but could not frighten the brave little bird away. I then took a slender stick which I thrust gently into the hole and endeavored to force her to leave by touching the head and wings. This, she resented by pecking angrily at the twig and I was at last obliged to allow her to remain while I enlarged the cavity. The nest I found to be composed of a large amount of miscellaneous matter, rabbit hair predominating. The material was spread over a large surface in the cavity, with a well defined depression in the centre, which contained the eggs, nine in number. Incubation had not commenced and I transferred them to my cabinet without accident. This was the largest set I obtained, the other two nests having contained six and eight respectively.

W. W. DUNLOP.

Montreal, March 10th, 1882.

MONTREAL BRANCH, ENTOMOLOGICAL SOCIETY OF ONTARIO.

The eighty-ninth meeting of this society was held on the 13th March, at the residence of the President, H. H. Lyman, Esq., who read a paper on the Lepidoptera collected at Sault St. Marie, in 1881, by Dr. Robert Bell, of the Geological Survey. All the species taken are also found at Montreal, with the exception of *Coenonympha inornata*, Edw., a butterfly taken in the Western States, but which extends into the Algoma region of Canada. A pleasant hour was spent over the microscope, and several rare and beautifully illustrated works on Entomology were also on the table for the inspection of the members.

REPLY TO ORNITHOLOGICAL QUERIES.

SIR,—In your March Number it is queried if the nest of the Whip-poor-will (*Antrostomus vociferus*) has been found in latitude 45°. The latitude of Listowel is nearly 44°, but owing to its elevation, is probably as cold as 45° of the sea level. The Whip-poor-will is quite common in the swampy woods of this neighbourhood, and during the calm hours that follow the sunset of the early summer evenings, its loud and melancholy notes may be heard in the town, from the woods north and south, though nearly a mile distant. Its eggs have been found by several parties in the vicinity, and one collector who procured some and appeared well acquainted with its habits, informed me that its nest is always sure to be found near the place where its notes are heard

in the early part of the season. Two years ago, a boy who resides a few miles south of this town, told me that the summer before, he had found the eggs of this bird on the bare ground, where a log had been removed, in a piece of swampy land. In 1865, when I came to reside in North Wallace, a neighbour found a nest of the Whip-poor-will, containing two eggs, in the month of August; this seems to indicate that it hatches more than once in the season, as it is well known that the eggs are generally found in the early part of June. The latter nest was on a piece of rising ground close by a pine and cedar swamp, and the eggs were of a bluish white color mottled with brownish black. The peculiar notes of this bird are probably the voice of the male, and its noisy repetition is generally heard at the time when the female is selecting her nesting place, and during incubation. After the young are hatched, the time and attention of the male is occupied in assisting to supply their wants, and his twilight notes gradually cease as the young become more voracious, until about the middle of July, when he becomes silent, except when the first eggs have been removed and his mate is again nesting. It makes no regular nest; the two eggs are deposited on some dry leaves, or fine rotten wood, near swampy woods, where amid the dense foliage, and gloomy shade, perched *lengthwise* on a low branch, or mossy log, the male passes the hours of sunlight in silence and inactivity, but as the shadows of evening gather over the woodlands, it commences its low, soft flight in pursuit of night-flying insects, or in some dark retreat, "begins its evening hymn." *The Winter Wren*—A query regarding the nest of this bird, is also made. I do not know it by that name, but there is a Wren quite common in the wild swampy woods of Central Ontario, whose thrilling notes are very pleasant, especially when heard in the early spring mornings, before the snow and ice have disappeared from the gloomy places, where the little creature takes up its summer residence. Its general appearance is similar to that of the House Wren, but it is rather smaller and darker in color. It sometimes utters notes like the red squirrel, and again like the chirp of the cricket, but louder. It forms a nest like that of a mouse, generally in the under part of the turned up root of a fallen tree, sometimes in the side of an old moss-covered log, or rather stump; the outside is formed of moss, and the inside is lined with fine dry grass, feathers, and hair. Its eggs are white with reddish spots scattered over the

large end. It sometimes lays eight eggs. Those in my collection were taken from a nest of six in the early part of June 1879. *Sitta Canadensis* is rather a *rara avis* in those districts where my ornithological researches have been pursued. It appears to prefer the deep evergreen woods to the hardwood timber lands. I have not seen its nest or eggs, but am informed that they differ little from those of the white-bellied species. I have often seen the nest and eggs of the latter and can furnish a sketch if desired. *Parus Hudsonicus* does not visit this latitude, and the Pine Grosbeak is only a rare winter visitor. Of owls I have not seen a nest or egg of any of the species, some of them, however frequent our woods, and doubtless nest here. Mr. Vennor's article on the nest of the Sparrow Owl, is the only article on the subject that I have ever seen. It is a very rare bird here. The Woodpeckers mentioned do not visit this region. The nest of a Crossbill, containing young, has been seen in a neighbouring township, in the month of March, and another species, the Shore Lark also nests in March and April.

WM. L. KELLS.

Listowel, Ont., March 15th, 1882.

Pine Grosbeak (*P. Canadensis*). I collected an adult female in the immediate vicinity of this city, about the beginning of August, 1879; this was the only one I have observed during summer. Mr. J. H. Carnall informs me that he found them quite abundant in September, on Nictaux mountain, Tobique river; he also found several old nests, which he assures me were made by these birds. Some years they are abundant, then, for two or three successive winters, we see nothing of them. During the winters of 1876 and 1878 they were very abundant, visiting the suburbs of the city, feeding on the berries of the mountain ash. Can you give a reason for the peculiar movements of this bird? Hudson Bay Tit, (*Parus Hudsonicus*). This Titmouse is undoubtedly a resident with us, and breeds in this Province. I collected a specimen on the 20th of May, and have observed them here during summer. Mr. Banks noticed a pair in June, carrying material for nest-building. Two nests of this species were discovered near Stewiacke, N.S., by Mr. Bailey of the Nuttall Ornithological Club. Red-bellied Nuthatch, (*Sitta Canadensis*). Have found this bird nesting near St. John. They are more abundant some seasons than others.

HAROLD GILBERT.

St. John, N.B., March 13, 1882.

NOTE.—These queries are going to do good eventually. In their promulgation, I wished to arrive at truth in order to correct the errors of old American writers on our birds, more especially regarding the time and localities of nidification of the species which pass the greater portion of their lives in high latitudes. Our correspondent gives no substantial proof that the Pine Grosbeak breeds in N. Brunswick. Until the nest and eggs are discovered, the mere occurrence of one adult female in August will not suffice to class it as a resident. They arrive about the latitude of Montreal during severe weather in September, being then gregarious, remaining as such in the woodlands until the middle of May following, when they leave for the far north. Regarding the nests spoken of by Mr. Carnall, it would be worth his while to visit the locality again during the breeding season. Will Mr. Gilbert be kind enough to send a description of the nest of the Red-bellied Nuthatch? Does it select an old knot-hole or excavate a cavity for itself?—C.

ACCLIMATING THE MESSINA QUAIL AT QUEBEC.

DEAR SIR.—In one of your recent issues you alluded to the efforts of Col. W. Rhodes, and others to acclimatize the Messina Quail in this Province. The Colonel is now in Europe and has, if I mistake not, sent orders for the importation of a few hundred of these birds. In order to help his praiseworthy efforts, I permitted him to send to my aviary of Canadian birds, the Quail he received too late for distribution in the woods last year. I intend to give them their liberty in April, and from the following statements, I hope success will crown the Colonel's efforts.

Yours truly,

J. M. LEMOINE.

Spencer Grange, }
Quebec, 20 March. }

W. Rhodes, Esq., Quebec, P.Q., Canada.

DEAR SIR.—Your favor of 13th January came duly to hand and much interests me. I did not see your referred notice to queries in

"Forest and Stream," or I might sooner have given you the gratifying news that the quail returned to Maine last spring. None were imported to this State in 1881, and they were observed here previous to the liberation elsewhere of any newly-imported ones. The young of the previous season were hatched in June and July. They mature very rapidly, and from the time of hatching (when they at once leave the nest as good runners) until the autumn migration, there is an interval quite equal to the time afforded the young of as many of our song birds to acquire strength for their long journey. By my advice and direction the 2,000 quail that I distributed throughout Maine, in 1880, were liberated in lots of not less than 15 or 20 in each locality selected. If this method with equal total numbers should be followed up for several consecutive years, I should have no doubt of success in the object desired. The results of a single season, however, may not prove to be permanent.

Yours very truly,

EVERETT SMITH.

Portland, Maine, Jan. 20th, 1882.

NOTES ON THE NATURAL HISTORY OF LUCKNOW, ONT.

SIR,—You published a list of reptilia procured by me in this vicinity, and other localities in Ontario. The following four additional species, have been added to my collection *Chorophyllus triseriatus*, Little Tree-frog, Lucknow. *Amyda mutica*, (four specimens.) Lake St. Clair. *Amblystoma Jeffersoni*, Jefferson's Salamander. Found at Hyde Park, by J. Morden. *Scotophis, Allighanensis* is reported to be found in Essex; its occurrence here is probable, as I have received several specimens from Michigan, which is in the same latitude, the only barrier being a river, separating the Southern portion of Ontario from Michigan.

The Red Lynx, *Lynx rufus* is not uncommon in this neighbourhood. I obtained four specimens this year, and I can procure more if I take the trouble to hunt for them. The Canada Lynx, *Lynx Canadensis*, appear to be a larger Northern species. It has never been seen on this peninsula, or south of the Ottawa river. I have read of it as occurring common in the Province of Quebec. Almost every school-boy has read the interesting account of Mr. Bannetyne in the "Reader;" of how an

Indian was killed by a Canada Lynx, and his brother's description of his death and removal for burial. Among birds, I record the capture of the Sandhill Crane, *Grus Canadensis*, shot by Mr. F. Martin on St. Clair flats. I obtained it from him. He killed another which unfortunately flew into an unapproachable morass and was lost. I accompanied him on the next day to hunt for it; the mud was deep and we could not find bottom with an eight foot paddle. The surface was covered with rank weeds and other vegetable refuse, preventing us from pushing the canoe into it or over it, and to attempt walking on it would be a mad idea. I shot the King Rail (*Rallus elegans*), and had it mounted; also a Yellow Rail (*Porzana Novaboracensis*). I presented these two birds to Mr. John Morden of Hyde Park. A very fine specimen of *Rallus Virginianus* shot on the flats may be seen at any time among his beautiful collection of Canadian birds. Among rare ducks, I secured two fine specimens of the American Black Scoter (*Edemia Americana*); also the Velvet Scoter (*Edemia fusca*); they are magnificent birds. I killed some splendid Canvas-back which I prize highly, as they are becoming scarce, but I am sorry to add that I lost a fine young specimen of the Red-necked Grebe, (*Podiceps Holbolli*), which by the carelessness of the Express Co., was not delivered until spoiled. I particularly regret this, as I have only procured one specimen during many years. The Great Northern Diver, (*Colymbus torquatus*), is common but difficult to obtain. I am not aware that *Colymbus Arcticus* has been noticed on the inland lakes; but I have shot three or four of the Red-throated Diver, (*C. Septentrionalis*). I have also seen the great White Heron, and one was killed near Wallaceburgh Co. Kent, but the ignorant person who shot it, allowed the bird to spoil. The Least Bittern, (*Ardetta exilis*) and Night Heron, (*Nycticardea grisea*), are not uncommon on the St. Claire flats.

J. H. GARNIER.

Lucknow, 27th Feb., 1882.

EXPERIMENTS WITH GUNPOWDER.

SIR,—I send you a report of some experiments I have been trying with the following powders, thinking it might be of interest to some of your readers. I have been unable to carry out the trial of the different kinds of powder I mentioned to you some time ago,

owing to the difficulty I have in obtaining it in such small quantities (viz.: 12 charges of 3 drams each.)

Description of Powder.	Over Wadding.	Over Shot.	Pattern 10 in. Plate.	Force per Pellet.	Velocity. Feet per Sec.	Recoil.	80 lbs.
Pigou, Wilks & Laurence No. 4 Grain	Thin Card	do.	21	2.06	617		
Curtis & Harvey's, No. 6 Diamond Grain	do.	do.	34	2.40	556		79
Hamilton F.F.	do.	do.	26	2.39	564		98
Hamilton "Caribou"	do.	do.	34	2.30	533		83
Schultze	do.	do.	24	2.53	566		87
CHARGE OF POWDER 2½ DRAMS AND 1 OZ. NO. 6 SHOT.							
(Same Distance.)							
Pigou, Wilks & Laurence	4 Pink Edge.	Thin Card.	40	2.76	644		91
Curtis & Harvey	do.	do.	25	2.03	470		83
Hamilton F.F.	do.	do.	30	2.71	638		81
" "Caribou"	do.	do.	16	1.90	431		73
Schultze	do.	do.	40	2.41	646		87

I may state the recoil spring was screwed up to 60 pounds.

The fine grain powder (Pigou, Wilks & Laurence's and Hamilton FF) did best with the 2½ dram charge, both in pattern and pellet force. Shultze's powder also gave the best pattern, but the force was not quite so good; the recoil being the same as with 3 drams of Curtis & Harvey's, and "Caribou" fell off very much, although the recoil of the former was four pounds heavier and the latter ten pounds lower. The heavy recoil with the 2½ dram charge was probably caused by the

change of wadding, the four pink edge offering more inertial resistance than the thin card and thick felt.

TABLE SHOWING HIGHEST AND LOWEST PATTERNS, VELOCITY AND RECOIL.

Charge 2½ Drums.	Pattern 10"		Velocity.		Recoil.	
	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.
Schultze.....	55	35	6:09	501	90	86
Curtis & Harvey.	30	20	5:03	419	85	81
Hamilton F.F....	40	20	7:30	528	83	80
Do. "Caribou".	30	10	4:64	412	75	71
Pigou, W. & L...	65	20	7:40	545	96	86
Charge 3 Drums.						
Schultze.....	34	17	5:93	577	90	86
Curtis & Harvey.	37	29	5:89	501	90	72
Hamilton F.F....	23	20	5:59	547	91	84
Do. "Caribou".	42	28	5:40	519	85	81
Pigou, W. & L...	35	15	6:38	589	93	84

AVERAGE OF THE DIFFERENT POWDERS.

Charge 2½ Drums.	10 in. Pattern.		Pellet Force.	Velocity.	Recoil.
	Eng. Black Powders.	Hamilton do.			
Eng. Black Powders.	33	23	2.41	559	84
Hamilton do.	23	23	2.36	524	77
Schultze.....	40	24	2.44	566	86
Charge 3 Drums.					
Eng. Black Powders.	28	30	2.53	596	78
Hamilton do.	30	30	2.36	545	83
Schultze.....	24	24	2.53	586	86

Schultze Powder recoiled nearly as much with these charges as it did when fired with 52 grains and 1½ oz. of shot, in which case it averaged 88 pounds.

SPREAD OF SHOT AT DIFFERENT RANGES, (1 oz. of Shot used.)

Distance	5, 10, 20,		30 and 40 Yards.	
	Charge of Powder.	Diameter of Pattern in Inches.	Ver-tical.	Hor-i-zontal.
3 drams.	4	6½ 17	43	40½ 79 and 70
3½ "	3	6 15½	40	38 74 " 69
3¾ "	4½	9 24	52	51 90 " 87

Circles with the above diameters do not include all the pellets in a charge, as there were a few wild shot that I did not include, as anything outside would only be struck by the merest chance. According to the spread of shot they do not travel in a straight line after leaving the muzzle, but curve outwards from the "line of fire." At first I thought this was caused by the shot passing through the paper screens, so I tried a shot at the 40 yard screen only and obtained about the same result; therefore I am satisfied the screens did not affect the direction, and conclude it is caused by the shot colliding with each other during their flight. The horizontal diameters of the 30 and 40 yard pattern, were shorter than the vertical in every case, varying with the charge

of powder, the heaviest charge giving the least difference. I measured and weighed the different powders, and find that Curtis & Harvey's is the heaviest for its bulk, "Caribou" the next, the other two samples are the same weight, and Schultze' powder was rather under half the weight. The charges of "Caribou" used in these experiments, were obtained from a friend, who purchased the powder as such.

Yours truly,

Lachine. 12-BORE GREENER.

A DEER HUNT IN FLORIDA.

DEAR SIR,—Thinking perhaps some of the readers of your journal, would like to know what kind of sport we have on the West Coast of Florida, I will try to give them an idea of what is to be had in the way of shooting. I shall tell them of what I saw in a day's deer hunting on one of the Islands of Charlotte Harbor. Leaving this place about ten a.m., a party of five of us, exclusive of "Bob" a very intelligent hound, proceeded across San Carlos bay; two going in a small schooner, and three of us going in a sloop; after a pleasant run of about an hour, we passed between Sanibel and Pine Islands, entering that beautiful sheet of water named "Charlotte Harbor." Before us lay a number of islands of a semi-tropical appearance. The palmettoes and hemp raising their heads high above the mangroves; between the islands were oyster bars which were covered with White and Grey Pelicans, Cormorants, and Great Snowy Herons. On the neighbouring mangroves, perched Ibises, the Scarlet necked and Louisiana Herons, and the beautiful Roseate Spoonbill, while farther up the harbor we could see the white sails of a schooner beating up towards the north. Sailing along the shore of Pine Island, we dropped anchor close to a small island near Pine. Leaving H— in charge of the boats, we took our small boat and rowed to an oyster bar between the two islands, where K. and I landed, and concealed ourselves behind a low growing mangrove. C—, S—, and the dog then went to the small island to drive it. We expected the deer, if any were there, would take to the water, and swimming to the bar, cross it, and endeavor to escape to Pine Island. We had not very long to wait till Bob gave tongue. K— and I crouched lower among the leaves and anxiously watched the opposite mangroves, but Bob drove away from us, and then suddenly changing his note, we knew he had TREED. "Well, by George, I'll bet that's a COON" said

K—, at that moment we heard two reports from a gun, then all was silent. We waited a few minutes longer, when Bob again spoke. He made the circuit of the island several times and then once more all was quiet. K— and I sat and watched the sharks pursuing the mullet. I counted seven sharks from five to ten feet long, all within a hundred yards of us; or we watched the interesting movements of a large Bald Eagle and an Osprey. The latter had captured a mullet, when the Eagle, which had waited patiently on a large mangrove near by for this event, immediately swooped down towards the Osprey, which uttering screams of despair, endeavored to rise above the Eagle. This, the last named bird tried to prevent. I never saw anything more beautiful than the flight of those two birds. The Osprey would rise quickly, then drop, but the Eagle was always close behind, and throwing itself down with a half somersault movement, would try to seize hold of the fish. When this had gone on for some time, a second Eagle appeared on the scene and took up the pursuit, upon which the first withdrew from the chase and returned to his perch. The Osprey now evidently despaired of escaping with its prey as the second Eagle which appeared to be a female, and was probably the mate of the other, pursued it so closely, it was forced to drop the fish, when the Eagle pausing for a moment in the air, went down with a rush and caught the fish before it fell in the water. In watching the Eagles we had almost forgotten the Deer, but Bob had not, for we could hear him approaching quite rapidly. We also heard C— and S— shoot once or twice. In a few minutes a deer jumped into the water from out the mangroves to be quickly followed by another, and close at their heels was Bob. On they came swimming rapidly towards us, nothing but their heads being above water. When they came within good range I gave the first the contents of my gun, turning it over, while K— fired at the second only wounding it however, and though we gave it another charge of buckshot, it swam around the end of the bar and escaped to Pine Island. We got the dog into the boat and going over tracked it for some distance into a mangrove swamp, but as the tide was rising, Bob lost the trail and we had to return without it much to our disappointment. Returning to the bar we took the Deer we had secured to the boats where we cut it up. As the sun was now getting down towards the horizon, the various kinds of birds began to seek their roosts or rookery,

as it is called. I stood there and saw flock after flock of Ibises, Pelicans Herons, Egrets, Spanish Curlews, Cormorants, etc. pass by, while the rookery was alive with them. High over all sailed the graceful man of war Hawks describing circle after circle with a scarcely perceptible motion of the wing. Having had something to eat, C— and I started for home, the others in the schooner going up the harbor in search of Flamingoes. We had a pleasant sail home and altogether enjoyed our hunt very much. I may mention that it was a "Coon" Bob had treed the first time, and our friends had to discharge their guns to frighten the Deer off the island, as they were not at all afraid of the dog. C— and S— could not get a shot at them as the mangroves were so dense.

Yours &c.,

F—.

Punta Russa, Florida.

A GENERAL DELUGE.

BY G. W. BROWN, M.D., ROCKFORD, ILL.

(Concluded.)

But they neglect to tell of those illimitable ages, which if enumerated, no one could comprehend, probably not less than six hundred million years, during which every particle of matter, whether dust, or clay, salt, sand, pebble, boulder or rock, mineral or vegetable, found on the earth, or deep below its surface, of which the various geological formations are composed, whether stratified or otherwise, overlying the primary rock, more than twenty miles in depth, and in which the fossil remains of by-gone ages are entombed, have been wrested and torn from the elementary rock, worn down by rolling upon each other, and by the action of winds and waves and falling waters, has subsequently been deposited in the beds of oceans, to again harden into rock, giving us the sandstone and limestone formations, the coals, shales, clays and all other rocks and earths, other than the quartz—the parent of them all.

The mind is overwhelmed as it contemplates the eternity of years which have preceded us, as the eternity which lies beyond! Truly it may well be said: "We stand midway between two eternities!"

Puny man may seek to abridge the years, and shorten the geological ages; but the startling fact is ever before him that finite mind is incapable of fathoming infinity. He must become conscious that *change*, not *destruction*,

is the fate of everything; that Law, fixed and eternal, governs the minutest particles of matter as of rolling worlds.

Man lives his brief life, passes away and is succeeded by others. Another generation repeats itself. So it has always been—so it will ever be. There really was no beginning, there can be no ending.

We may render homage to a master mind who designed all, and called all into being, or insist that all is self-existent and eternal, and we shall find the result is the same. It saves one step in the grand scale of creation. The ancients thought the earth was a plane, and rested on pillars; that the pillars rested on a rock, and the rock on a turtle's back. But what does the turtle rest upon? was the inquiry of the sceptic.

The logic that there is no design without a designer, no law without a lawgiver, is only a repetition of the pillar, rock, and turtle theory as regards the earth.

The sceptic of to-day meets all our arguments in regard to a first cause with the syllogism: "All the works of the Creator give evidence of design. As no design can exist without a designer, therefore," say they, "the Creator must have had a designer." Astronomers found that the earth did not rest upon pillars; that there was no need of a rock for them to stand upon; nor a turtle's back to support the rock; so when humanity shall better understand the forces of Nature, self-inherent in matter, which calls world's into being and endows them with motion and life, there will be less need for trying to comprehend that which is incomprehensible. The Law governing the mighty machinery of the universe; which keeps all in equal poise; which causes the earthquake and the upheaval of vast mountain chains; which drains oceans and sinks continents; which fills the atmosphere with lurid flame; and startles the people with its thunder crash; which gives rise to the winds, the waves and the tides, the heat of summer, the cold of winter, and the thousands of other incidents of well defined Law, once ascribed to the action of an *angry* God, is now well understood. As knowledge is further developed, other secrets of nature will be revealed, and the mythical causes will be further and further removed into the realms of the ignorant past.

The genuine student has no theories predicated upon early teachings. The great book of Nature is wide open before him, penciled by unerring Law, and everything must be tested

in the great crucibles of Reason and Truth. The dross is only consumed. The pure gold is made brighter by every test applied to determine its genuineness.

The Sanscrit is probably the original of all modern European languages. It contains the roots of the Latin, Greek, Celtic, German, and Slavonic. It is the ancient tongue, which prevailed throughout Hindostan, and from the Gulf of Bengal to the Arabian sea, extending to the Himalaya mountains on the north. The language has not been spoken for many thousand years. The sacred books of the Brahmins were written in it, and, hence, have been preserved to modern times, without alterations common to a living language, as our ancient literature has been transmitted to us through the Greek and Latin. Scholars find the original of many of our myths in the Sanscrit, the story of "William Tell" being one of them, though the scene of it is now located in Switzerland, and the occurrence is made to have transpired within a few hundred years.

We stated in a former article that the account of a general deluge was undoubtedly copied by Jewish historians—priests, Josephus tells us,—from Babylonian records, while the Israelites were captives in that country. The Babylonian history, without question, was the source from which the flood of Deucalion, as well as that of Noah, was derived; but the story was older than Nineveh or Babylon; it was transmitted to them from a still older civilization; it came to those ancient people through the Sanscrit literature, the common fountain from which Chaldaea, Assyria, Persia, and Egypt, were supplied, and from which the Phœnicians drank second hand, as did the Hebrews.

The geography of the old Sanscrit books describes the world as "a circular plain, with a slightly convex surface, sloping gently on all sides to a surrounding ocean. Beyond this ocean, which incloses the world in a vast river-like circle of waters, was a circular range of mountains, beyond which none but the most powerful gods could pass. In the centre of the world, at the highest point of its surface, stood Mount Meru, with Jambu-dwipa, the primeval home of the Aryan race, spread out around it," bordered by six other grand divisions of the earth.

These mountains bordering the ancient ocean supported the vast vault which spanned the heavens. Above this vault was the home of the superior gods. From their hand direct

came light, and heat, and dews, and rains, and all other blessings; and, when the gods were angry, winds, and storms, thunderbolts and earthquakes. The sun and stars were made expressly for man, as were the seasons, with seed-time and harvest. The earth rested upon pillars, while under it were immense fires, in which the demons were confined, and here the wicked were doomed to dwell; while above the vault were the Elysian fields, the home of the blest.

This wild astronomical and theological theory of creation was the prevailing idea among all peoples, five and six thousand years ago. Indeed, the true theory in regard to the solar system has been taught by the learned but a little more than three hundred years, the great mass of the uneducated still entertaining a belief in the ancient system, and are still quoting their sacred books in confirmation of it. The Phœnicians taught this flat-earth-and-vaulted-firmament theory at home, and in all their colonies. It was a part of the religious belief of all the nations bordering on the Mediterranean. It was believed by the cultured Greeks, as by the more modern Romans. The whole system of theology of all these nations was built upon this idea; and this was also true of the Hebrews, as their books furnish incontrovertible evidence. True, Herodotus, the Greek historian, ridiculed this teaching, and wrote:

"I cannot but laugh, when I see numbers of persons drawing maps of the world without having any reason to guide them; making, as they do, the ocean-stream to run all around the earth, and the earth itself an exact circle, as if described by a pair of compasses."

The reader will please remember that this was the idea entertained by him who gave us a history of the "flood," the "opening of the windows of heaven" through which to let down the rain, and the breaking up of "all the fountains of the great deep." This conception of the deluge came from Indus; it was as old as the most ancient civilizations; but it had been modernized with advancing thought as was the story of William Tell—as have all the myths which the learned have exploded—their origin lost in the sands of time, so antiquated that no one can trace their beginning, or learn when they were not believed as facts.

The mythical teachings in regard to a general deluge are not the only fabrications which have puzzled humanity, and, because of being interblended with a religious education,

have paralyzed investigation through many generations. The Egyptians taught that the world would be alternately purified by water and fire; that these were parts of the system which the Creator employed to prevent man from growing in power, and gaining a mastery over him! The teachings of barbarian races, slightly changed, have survived the ages; they have entered into the religious beliefs of the world, and will be as difficult to eradicate from the common mind as any other inherited error of so ancient an origin. Thos. Moore has well written:—

"The lover may
Distrust that look that steals his soul away;
The babe may cease to think it can play
With heaven's rainbow; alchemists may doubt
The shining gold their crucible gives out;
But Faith, fanatic Faith, once wedded fast
To some dear falsehood, hugs it to the last."

It is to be regretted that scientists are not permitted, without subjecting themselves to sectarian abuse, to pour in a flood of light upon the ancient fallacies which have crept into all our early teachings. Were they at full liberty to give the public their honest thoughts we should soon have a truer conception of the past, and a more exalted idea of the future; but ere that "good time coming" shall dawn upon the world, it is possible that many years may intervene.

Commencing with the story of creation, as borrowed from the Hebrew writers from countries where they had been slaves, wherein it is represented that the whole planetary and stellar systems are the out-growth of six days' labor, (not the production of a single mind, as the English reader finds it in his translation; but the task of *many gods*, as a correct rendering of the Jewish narrative, will show), with all the long incidental errors, following this first incorrect teaching, and ending with the looking forward to a general destruction of the material universe, when a grand conflagration will envelope all in universal ruin; when earth, and moon, and sun, and stars, will be "rolled together as a scroll," and disappear, while darkness and chaos succeed the present order of things, much is found that needs revision. He who is sincerely honest is hopeful that the day will not be too far distant when every false teaching shall receive that consideration it deserves; when every myth shall be exploded, and the sunlight of Truth shall illuminate all the dark corners of the world. This grand consummation of desire will usher in the *real* millenium, when "knowledge shall run to and fro as the waters cover the great deep."

THE BIRDS OF PREY OF NOVA SCOTIA.

By J. BERNARD GILPIN, A.B., M.D., M.R.C.S.

IN making this list I have personally identified, with one or two exceptions, every species in it. I will not say that no other specimen may be added, but that if hereafter noted, it will be a very rare one to have escaped my notice of more than thirty years. Personal identification of each species also by the writer, even if in a narrow limit, adds always to the interest and value of a paper. In classification I have used Key to N. American Birds, by Dr. Coues, 1872, of the value of which it scarcely needs any mention from me. I have found, with one or two exceptions, all the birds of this Order common to North Eastern America, in Nova Scotia, and noticed those I expected to find and failed. From their nature and food they are rare everywhere, and one who has witnessed the scarcity of all animal life in our forest, and the little bird life even in our cultivated fields, is not surprised by finding a greater scarcity of this Order. The innumerable flights during the autumn of what are called shore birds, chiefly composed of the Genera TRINGA, TOTANUS and closely allied species in their autumn migrations, attracts numbers of the Genus FALCO. Our marshes, especially after mowing, which lays bare the runs of field mice, and the haunts of frogs, snakes and other reptiles, attracts the harriers and buzzards, and the sea shores of the Bay of Fundy, at ebb tide, left in far-reaching and muddy flats abounding in stranded fish, bring the eagles and fish hawks for their prey, the latter seizing its living prey from the shallow pools, whilst the former, when not plundering the fish-hawk, contents himself with the dead and stranded fish. Except the grouse, the hare, and perhaps shrews in the depth of the winter forest, or a white weasel or jay bird, or a red squirrel now and then, the stern winter has locked in snow and ice everything that makes food for the few owls that hibernate with us. The few eagles and fish-hawks I have dissected, I have found fat, even in winter; the hawks generally thin. I have never identified any kites in Nova Scotia, but my son has observed fork-tail hawks in the air, which I have also seen, but very rarely, most probably the Genus NAUCLERUS.

LIST OF RAPACIOUS BIRDS OF NOVA SCOTIA.

FAMILY STRIGIDÆ—(Owls).

- Bubo Virginianus*—Great horned owl.
Otus vulgaris (var. *Wilsonianus*)—Long-eared owl.

- Brachyotis palustris*—Short eared owl.
Syrnium lapponicum (var. *cinerium*)—Great grey owl.
Syrnium nebulosum—Barred owl.
Nyctea nivea—Snowy owl.
Surnia ulula (var. *Hudsonia*)—Hawk owl.
Nyctale Tengmalmii (var. *Richardsoni*)—Tengmalm's owl.
Nyctale Acadica—Saw-whet owl.

FAMILY FALCONIDÆ.

- Circus cyaneus* (var. *Hudsonius*)—Marsh hawk.
Accipiter fuscus—Sharp shin.
Accipiter Cooperii—Cooper's hawk.
Astur atricapillus—Goshawk.
Falco sacer—Jerfalcon.
Falco communis—Duck hawk.
Falco columbarius—Pigeon hawk.
Falco sparverius—Sparrow hawk.
Buteo borealis—Red tail hawk.
Buteo lineatus—Red shoulder hawk.
Archibuteo lagopus (var. *Sancti Johannis*)—Rough legged buzzard.
Pandion haliaetus—Fish hawk.
Aquila chrysaetos—Golden eagle.
Haliaetus leucocephalus—Bald eagle.

You will find in this list, taken as regards its nomenclature from Coues' Key, that many generic as well as specific names are changed from Wilson, Audubon, Nuttall, Richardson, and even Baird, or other recent writers. The greatest change is with the specific. Whilst we accept the changes from the older authors as the necessary progress in the science, yet we can see in the differences from the modern ones that one principle rules them, a nearer return to truth, to the principle of returning to the specific given by the first discoverer of the species, allowing him the exclusive right of naming, and finally in birds almost identical in both continents the allowance of geographical variation from one common origin. This of course is the most philosophical way of settling points beyond our reach. Field naturalists can scarcely be allowed the privilege of criticising, which must be the result of intimate knowledge of large collections and libraries, and, as respects the author of the Key, still larger experience of field life. Yet one may be allowed to say that anything that reclaims the science from the divisions of sub-families and sub-genera, and innumerable lists of synonyms made, not for truth but for personal exaltation, must be hailed with pleasure by all true naturalists. Of the family of owls which inhabit our Province, the Halifax museum, with the exception of the great grey owl (*S. lapponicum*), contains an excellent collection of every species I have identified myself. The great grey owl was taken some years ago in Pictou County, and a specimen was in the collection of the late Dr. McCulloch, of Pictou town. This is the only recorded instance I know of its being here. The great horned owl (*B. Virginianus*)

is common. It both breeds and winters, usually keeping in the thick forests, seldom coming out in the clear country. I have seen its young in the spring, and the adult at all seasons of the year. A specimen shot at Digby, Feb. 1876, when feeding upon a black duck, was nearly white, washed by pale ferruginous, and barred and spotted light brown. The pure white chin remained unchanged, as it has done in every individual I have examined, how much otherwise the plumage may have been altered. Though not resembling Richardson's figure, I thought it may have been the Arctic variety. Our camp fires attracted them when camping on the shores of a forest lake in Digby county, Sept., 1871. By answering their wild feline cries, we kept them about us the long night, unseen, yet continually shifting from one spruce fir to another, amongst which our camp was pitched. Their prey is nocturnal, and thus less likely to be known. Grouse, hare, and even ducks may be readily captured by this powerful bird, which uses its beak as well as its claws in destroying life. A poor pet crow, the favorite of the village at Annapolis, visiting every house for its bone, and sleeping now in an old porch, now in an unfinished church, or under the eave of inhabited houses, alarmed the inmates, beneath whose eaves it had sought a roosting place, by its shrill cries one calm midnight. On going to its rescue a large nocturnal bird of prey floated away. At sunrise it was found dead on the grass beneath, no doubt a victim of this powerful nocturnal prowler. Of the short eared owl (*B. palustris*) and the long eared owl (*O. vulgaris*), they may be said, though not rare, still not very common. I have Mr. Downs' authority that the short eared nests in Nova Scotia, near Halifax. Probably both do, yet the number of both that appear during winter proves migration to be the chief cause of their presence with us. Of the barred owl (*S. nebulosum*), my notes give May, as the month I identified him in the breeding season. I have no doubt he winters with us, but my notes have no monthly dates. The hooting of this owl comes down on the night wind to you like the loud broken laughter of many men. A stranger would easily suppose he was near a large logging party. The majestic snow owl (*N. nivea*) I do not think nests with us. He is usually a winter visitor, though I saw him once, August, 1854, on Sable Island, with all his feathery alpine plumage, sitting upon the hot sand, the snowy, thick muffled claws

reposing on sand that heated your touch. A few years after the island had been stocked by domestic rabbits, this bird made his appearance, in 1827, and ever after paid it an annual visit. I saw him patiently watching the burrow mouth, instantaneously to seize its emerging owner. He is usually our winter visitor, and like other species sometimes comes in flocks. In the winter of 1876 Mr. Egan, at Halifax, had fourteen specimens at one time. The settlers told me they sat like pigeons upon their barns, coming out of the forest at dusk. There had been no storms or local reasons for this migration which extended into New England. The hawk owl (*S. ulula*), is also a winter visitor. He shows himself sometimes in flocks. Some years ago there were more than a dozen brought into Halifax, then not seen for years, and of late returning singly. Of Tengmalm's owl (*N. Tengmalmi*) I have seen but few specimens, and believe it very rare. Four are the utmost I have seen in Nova Scotia. The Saw-whet (*N. acadica*) is common and resident, keeping the deepest forests as his abode, frightening the Indian at his bivouac, who never will answer him or allow any one to do so in his camp, for fear of impending misfortune. Yet he, too, appears sometimes in flocks in the open. During the spring of 1879, Mr. Egan had numerous specimens offered him. The little red owl (*S. asio*), so common in New England and also in Newfoundland (Reek's Zoologist, 1869,) I have never seen here, in which Mr. Downs joins me. In its migrations it passes perhaps north of us. In ending my remark on our owls, I may say that about four have been identified as nesting with us, the others are winter visitors, and that with the exception of the Great grey owl, there are excellent specimens of each species in the Halifax museum.

In passing to the diurnal birds of prey, the FALCONIDÆ, we find more power and strength developed in each individual, though denuded of their soft coating; the hind toe (in the owls very small comparatively) greatly increased, a greater propensity to use the claw than bill, and a greater ardour of temperament, and power of wing action. This family naturally separates itself into the harriers, the falcons, the hawks, the buzzards, and the eagle ! mean as regards Nova Scotia, since the vultures never come to us. Of the harriers, resembling the owls in a facial circle, we have one species (*C. cyaneus*), a geographer's variety of the old world harriers.

(To be Continued.)

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WILLIAM COUPER, Editor.

THE GAME LAWS OF THE PROVINCE OF QUEBEC.

A NATURAL HISTORY REVIEW.

It is notorious that for many years past Game Laws have been in force in the Province of Quebec; that these laws were repeatedly amended and even at this instant they are imperfect; that on all former occasions the alterations sought for were brought forward by parties who knew very little of the Natural History of the animals which are said to occur in the Province. In the Bill now before the Legislature of Quebec there is the heading *Moose, Deer, Elk, Caribou*. Now, to make the matter plain, the word DEER includes all which are hunted for venison. We have in this Province, four species of deer, viz.: the Elk, commonly called and known as Moose; two of Caribou and the Virginian Deer. These quadrupeds are invariably confined to certain localities, each having ranges of various extent. For instance the Virginian Deer has not a wide range in Quebec, and it may be now accidental in places where it was formerly abundant. The cutting down of forests accounts, in a great measure, for its disappearance. The Elk or Moose is also similarly situated, because its chief food consists of moosewood and aquatic plants; it is also extremely fond of mountainous regions, especially where there are lakes, which are not frequently visited by man. The deer known as Caribou of which we have two species, are generally confined to high latitudes, and it is only during winter that man can approach them. To make the Game Laws perfect, these animals should be indicated in the Act, by placing the scientific after the local name of each species—as Elk or Moose, (*Cervus alces*); Woodland Caribou, (*Rangifer tarandus*); Barren-ground

Caribou, (*Rangifer Grænlædicus*), and the Virginian Deer, (*Cervus Virginianus*) This would make the law definite with regard to these animals. Confusion will certainly arise from this nomenclature when not framed in a manner to be clearly understood by the sporting people of the Province. Greatly as are the inhabitants of the United States ahead of us in some matters of this nature, they will call animals by wrong names, for instance the large deer or Wapiti (*Cervus Canadensis*) of the Rocky Mountains, is vulgarly named Elk, while the latter is the animal we call Moose in Canada, and which is scarce near the Rockies. In the French and English copies of the Act, the word *Pekan* occurs. Now, surely, if the framer of this Bill went to any trouble, he would have discovered that this is the animal commonly called Fisher by English people, *Musclea Canadensis* of naturalists, and not the wild cat (*Chat sauvage*). Well, what animal have we here? We are told that it is the Racoon (of uncommon occurrence in this Province). There is another common animal called Lynx (*L. Canadensis*) which is also called *wild cat* by country people, and although there is no true wild cat found in the Province of Quebec, it occurs in Ontario. As for Muskrat, there is no greater nuisance among the quadrupeds of this country. It burrows under the banks of rivers, making numerous holes whereby the fertile lands of the farmer (especially if a stream is overflowed in Spring), are destroyed; however, if all parties are satisfied with the protection of this animal, we are.

Regarding the feathered game, no bird called Partridge exists in this latitude. There are five species of Grouse occurring in the Province—i. e. the Ruffed Grouse (*Bonasa umbellus*), Sharp-tailed Grouse (*Tetrao pedioecetes*), rare in the valley of Lake St. John, Upper Saguenay; Spruce Grouse (*T. Cana-*

densis), two species of Ptarmigan (*Lagopus Americanus*), and (*Lagopus rupestris*), both winter visitors; the former common, the latter rare. Wild Swan should not be included in the Bill as all the North American species are *rara avies* in this Province. The Canada Goose (*Bernicla Canadensis*) is a wild goose; the Widgeon (*Mareca penelope*)—a rare visitor in Quebec—and Teal (of which there are two species) deserve protection. The Black Duck (*Anas obscura*) is certainly the duck of the sportsman, because it is the most game and prolific of all the wild ducks. The Mallard, Canvas-back Duck and Pintail are not specially protected although they are sometimes abundant on Quebec waters. But as this Bill protects all the wild ducks (fish and vegetable eaters) we will not further pause to point out mistakes in regard to what constitutes aquatic game. There is a vast difference between birds (ducks) that are good food and those that are not, the latter are allowed by law to live and destroy the fry of salmon and other valuable food fishes. Why this portion of the Bill is not properly put together, we cannot understand. The laws of Ontario regarding wild ducks, merely protect those that are thoroughly game, such as Mallard, Black Duck, Wood or Summer Duck, and Gray Duck, the latter, so far, is not identified or determined. All other species are classed as sea ducks, although not game, they are protected between 1st May and 15th of August. We are as anxious as the Provincial Government to protect insectivorous birds, and would be greatly pleased to see this portion of the Bill perfect. There are birds in this section of curious nomenclature—"Grives," we know them not. "Cow buntings,"—thank Providence, there is only one species in Canada; it is a parasite: a robber among its kind, and if the Hon. framer of the Bill, knew what it was, he would not have classed it as he has. "Bobolinks," the Rice Bird; what is extraordinary is that in the Hon. Mr. Flynn's

Bill, the scientific name given to this bird is not correct, (*Dolichonyx oryzivorus*), of dear old Swainson is now converted into *Dolichonyx oryzivorus* by a Quebec legislator, and to add agony farther, the Starling (commonly known as the Marsh Blackbird), our two species of Grackle and the two species of Grosbeak (one a winter, the other a summer visitor), are classed as insect eating birds. We can prove that certain species of FALCONIDÆ or Hawks are insectivorous; that Crows, Waxwings and Shrikes are insects destroyers, and furthermore that we have two species of Shrike in the neighbourhood of Montreal—the Loggerhead (common), and the Great Northern Shrike (rare), both of which destroy insects during certain portions of their residence with us. By the way the latter is another species to which the scientific name is given wrongly. Compare text of the Bill. C.

THE NEW GAME LAWS FOR THE PROVINCE OF QUEBEC.

A bill to amend and consolidate the Game Laws is now before the Quebec Legislature. The principal changes are as follows:—

Moose, Caribou and Virginian Deer.—Present close season, 1st February to 1st September; proposed close season, 1st January to 1st September.

Wild Ducks and Geese.—Present close season, 1st May to 1st September, west of Three Rivers, and 15th May to 1st September east of Three Rivers; proposed close season, 1st May to 1st September throughout the Province.

Ruffed Grouse.—Present close season, 1st March to 1st September; proposed close season, 1st January to 20th August.

Canada Grouse, Ptarmigan.—Present close season, 1st March to 1st September; proposed close season, 1st February to 1st September.

Hares, snaring (this is permitted by the present Act) to be prohibited.

By the new Act, all persons who shoot are required to take out license, non-residents of the Province to pay \$20 for a license to hunt

any kind of game in each district; residents to pay \$1 to \$2 for each district. License good for the whole Province, \$50.

The proposed amendments in regard to the close seasons are to be desired, and if the Spring shooting of Black Duck, Mallard, Wood Duck and Teal were prohibited, the Bill, in this respect, would meet the views of most sportsmen. Numbers of Black Duck and Wood Duck breed in suitable localities throughout the Province, and many more would, doubtless, remain to nest if protected in the Spring, as they commence nest-building early in May, and the full number of eggs is usually deposited before the latter part of that month. It is true many nests are found as late as the middle of June, but this is the result of the birds having been disturbed in Spring and prevented from occupying the places they had first selected, as in the most Northern parts of the Province, where they have been undisturbed, nests have been found as early as the 15th May. The first principle of all laws for the protection of game is that the quadrupeds and birds protected should not be disturbed at those particular seasons defined by Nature for the perpetuation of their species. It is obvious, therefore, that it is wrong to permit the shooting of these ducks until 1st May, as they have paired and selected their places for nesting long before that time. The proposed division of the Province into districts, and the imposition of a license fee for the privilege of shooting, is not likely to meet with much favour from sportsmen, who have already to pay pretty dearly for the privileges they enjoy. The confusion likely to arise from this division, and the impossibility of collecting the tax impartially will make this portion of the Bill most unpopular, not only to sportsmen, but to farmers and others who, from time immemorial, have been accustomed to enjoy a little shooting in their spare time. The necessity of securing a Government license to hunt on their own farms, cannot but seem arbitrary;

and we fail to see any good to be derived from the imposition of this tax as the revenue accruing therefrom will be more than consumed in the cost of collection.

A careful revision of the Bill is necessary before its final reading as several omissions occur, and the use of local names may lead to some confusion.

A MYSTERY.

A magnificent adult Moose head was lately sent by W. F. Lewis, Esq., of this city, to me to stuff. There is a mystery about the ears of this head. Each ear has three deep cuts longitudinally from the apex towards the base. The edges of the cuts *are healed and covered with hair* similar to the outside margins of the natural ear. Who or what cut the ears of this Moose, and what was the animal's age when these cuts were made? The head was sent from Pembroke by Messrs. T. & W. Murray to whom I wrote asking if they could give me some information regarding these ear-cuts, suggesting that at one time (probably when young) the animal may have been the property of some one who had it partially tamed; that the cuts were then made as marks of identity, and that it afterwards escaped to the woods. I have had deer heads with fresh ear-cuts which were done by the hunter after the deer was shot, but this one is the first instance of the kind coming under my notice. Messrs. Murray say:—"We do not think that it was ever tamed as there are no settlers in the section it was taken from. The Indians might probably keep one a short time when young, with a view of taking it where it could be disposed of alive, but they very seldom keep them any time." I may probably have some further information regarding these cuts. They do not represent wounds made by a quadruped; they resemble cuts made with a knife; but when and where they were made, is the mystery. C.

ORNITHOLOGICAL QUERIES.

In former numbers of this journal we have asked for information regarding the economy of certain birds inhabiting Canada, of which very little is known. The natural history of the following species appears to us, worthy of further investigation.

The Gray Sea Eagle or Ern (*Haliaeetus albicilla*) It was described by Cuvier. Now, there is a doubt expressed by American ornithologists as to its being a true species. An eagle resembling the European Ern occurs in Canada to which the name Gray Sea Eagle is applied, but some persons contend that it is only the young of the Bald Eagle. Mr. R. Rowe, of St. John, N.B., writes to ask "If the female of *Haliaeetus leucocephalus* (Bald Eagle) has plumage same as male—*i. e.*—with white head and tail. I am inclined to think that the female has not the white head and tail. I saw a pair this fall, one had head and tail like snow, and the other which I concluded was the female, was brown. I am speaking of course of mature plumage. If I had had my rifle with me at the time, I believe I could have killed the two, as they were not twenty yards from me, and both in a line sitting on an old stump." Can any of our correspondents inform us if the Northern Sea Eagle (*H. pelagicus*, Siebold), has been shot in Canada? These three eagles are evidently mixed up in such a way that it will take some time to separate them properly. Have ornithologists compared the eggs of *H. pelagicus* with those of *H. leucocephalus*, or can the egg of *H. albicilla* be produced as identified?

Golden-crested Wren, (*Regulus satrapa*, Licht.) I saw this species feeding its young at Mingan on the North Shore of the Lower St. Lawrence. Has its nest been found in Nova Scotia, New Brunswick or the Western portion of the Province of Quebec?

Tit Lark (*Anthus ludovicianus*, Licht.) This species visits the Provinces of Ontario and Quebec in the Fall; is said to nest in high latitudes. The bird is terrestrial and possibly the nest may approach the form of that of a *Melospiza*, and may therefore be overlooked. I have never noticed the Tit Lark in Ontario or Quebec in Summer, hence it is questionable if it nests in the vicinity of latitude 46.

Blackburnian Warbler (*Dendroica Blackburniae*.) This pretty warbler passes north through our forests about the middle of May. Has its nest been found in New Brunswick or Nova Scotia? I saw numbers of this

species in the woods of Labrador on the 17th June, but could not discover the nest. I found the nest of the Black and Yellow Warbler (*D. maculosa*) at Natashquan on the latter date.

The Evening Grosbeak (*Hesperiphona vespertina*, Bon.) Occurs in Western Ontario. Can any of our correspondents send us a description of its nest, and the geographical range of the bird in Canada? How far East has it been noticed in Ontario?

The Pine Finch (*Chrysomitris pinus*, Bon.) Has this bird been found breeding in Canada?

The Lesser Red-poll (*Aegiothus linaria*, Cab.) Two species of Red-poll are sometimes common in the Province of Quebec in the Fall, but I have not yet met with a person who found their nests in Canada.

The Sea-side Finch (*Ammodramus maritimus*, Sw.) Can any of our Nova Scotian or New Brunswick ornithologists inform us if this finch breeds within their Provinces? I found nests of a finch on the Labrador coast which I took for this species, but at the time had no facility to identify them.

The Tree Sparrow (*Spizella monticola*, Baird.) This is another species which appears in the Province of Quebec. It passes north in April. The Fall birds are mostly all young. Probably they nest in the woods on the Laurentian Mountains. I would like to obtain information regarding the nest of this species.

The Magpie (*Pica hudsonicus*, Bon.) This bird is said to frequent the vicinity of Lake Superior. Has its nest been discovered near the latter region? C.

BULLETIN OF THE NATURAL HISTORY SOCIETY OF NEW BRUNSWICK.

The first proceedings of the Natural History Society of New Brunswick are before us; the matter, scientifically viewed, is fully equal to that issued by older institutions. It contains a catalogue of the birds of New Brunswick, by Mr. Montague Chamberlain, who appends brief notes relating to their migrations, breeding, &c. The discovery of the breeding localities of birds forms the most important research in Ornithology at this age of human inquiry, and a compiler of matter relating to this portion of American bird history, should certainly be encouraged in order to have it authentic. From Mr. Chamberlain's notes we obtain new information regarding a few species which were heretofore considered mysterious as to their breeding places, and we wish

other Oological students to follow his example and penetrate the primitive forests of New Brunswick to add additional facts to this excellent list. The Society's Committee on Botany have made a good beginning in issuing a list of plants found within the Province, and we have no doubt that through the exertions of Messrs. Hay, Chalmers and Vroom, the Flora of New Brunswick will be as thoroughly worked up as the birds have been by Mr. Chamberlain. The Bulletin is creditable to the Society and printer, and doubtless No. 2 will contain matter of similar interest.

REVIEW.

THE FARMERS' ADVOCATE, published at London, Ontario. The April number of this serial contains two handsome engravings (specially designed for the journal), and is replete with matter interesting to the Agriculturist. Subscription, \$1.00 per annum.

We call the attention of those of our readers who are fond of the Rod, to the advertisement headed "Sportsman's Retreat," in this issue. Our friend should have a full house during the season; guests are promised plenty of sport.

Correspondence.

To the Editor of THE CANADIAN SPORTSMAN AND NATURALIST.

DEAR SIR,—Referring to your "Ornithological Queries" (just the thing that is wanted, and answers to which I shall look forward to with much interest), perhaps it will not be uninteresting to lovers of Ornithology to know that last week was shot on the Belvedere Flats, about twelve miles from this city, a fine female specimen of the Trumpeter Swan, (*Cygnus buccinator*). It was very thin, but in excellent plumage, entirely white with the exception of head and neck, which had markings of a very light rusty brown, so light that at a distance of a few yards the whole bird appeared white. Measurement from tip to tip of wings, 6 feet 6 in. By the slight markings on the head and neck, I concluded it was a young bird. This appears to be quite a *rara avis* in these parts. Last fall, there was killed

at Dick's Lake, N.B., a Florida Gallinule, (*Galenula galeata*.) At Musquash, N.B., seventeen miles from here, on the 4th April, last year was shot the Purple Gallinule, (*Prophyria Martinica*), and another last September at Quaco, N.B.; the latter was in fine feather, and appeared to be a young bird. Several Green Heron (*Ardea virescens*), were taken last September at Brier Island, N.S.* At same time were seen large flocks (?) of the Scarlet Tanager, (*Pyranga rubra*), and Baltimore Oriole, (*Icterus Baltimore*). We have had also, this spring, quite a flight of Cross-bills, both the red (*Curvirostra Americana*) and the white-winged (*C. leucoptera*). The pine Grosbeak, (*Pinicola Canadensis*), is frequently found in this Province, but whether they nest here or not, I have been unable as yet to determine. With the exception of the flocks of Tanagers and Orioles mentioned above, I have seen all these birds *in the flesh*.

I am, yours truly.

R. ROWE.

St. John, N.B., 10th April, 1882.

* An island in the Bay of Fundy, at the S. W. extremity of Digby Neck, on it is a lighthouse.

NIDIFICATION OF NUTHATCHES.

SIR,—When I wrote the article published in the April number, I stated that I had not seen the nest or eggs of *Sitta Canadensis*, and in a note to Mr. Dunlop, giving some of my observations regarding the nidification of Nuthatches, I stated that on one occasion I had seen the nest of this bird—*Sitta Carolinensis*—in a cavity of a decayed tree, like that of a wood-pecker. Subsequent investigation amid the wild haunts of these birds, proves that the red bellied species are far more numerous than I had supposed, and a review of my observations, taken *at the time*, now makes me confident that the nest referred to belonged to the latter bird. It was in the early part of June 1866, I was cutting down timber on the margin of a heaver meadow where the wood, mostly balsam, cedar, and white wood (linden), was thick. I happened, among others to fell an old linden stub, and to my regret and the great distress of the parent birds, found that it contained the nest of a Nuthatch, in which were three young ones, which were nearly killed by the fall of the tree. The cavity in which the nest was placed was about twenty feet from the ground, made like that of a wood-pecker or chickadee, and not more than

eight or ten inches deep; this excavation, I have no doubt, was the work of the birds themselves. In the bottom was a small quantity of fibrous, woody matter. This nest was altogether different to any of the Nuthatches that I have seen, and it struck me at the time as very peculiar. I also noted that the birds were darker in color, and their notes considerably different to those commonly observed in the high, hardwood lands, but until years afterwards, when I procured a copy of "Ross' Birds of Canada," I was not aware that the Red and White-bellied birds, were distinct species. Since then I have observed that the habitat of *Sitta Canadensis* is generally the deep evergreen woods, and lately, I note, that its call is louder, more prolonged and plaintive than that of its white-bellied congener, which latter is partial to the hardwood regions, and always makes its large nest (formed of moss, fibrous bark and hair) in the natural hollows of trees. Years ago I had observed some of these birds excavating cavities in old stubs, generally softwood timber, and that in the fall of the year, they laid up a supply of different kind of seeds in such place; I am now disposed to believe that this was particularly the work of the Red-bellied species.

W. L. KELLS, Listowel, Ont.

SUPPOSED NESTS OF THE CROSSBILL.

On the 10th of April, when taking a ramble for ornithological purposes, with my two boys, in a cedar swamp, north of this town, I noticed a number of nest-like structures, placed on the branches of cedar and other evergreens, generally about twelve to twenty feet from the ground. I had often, in different places, noticed similar structures before, always in the early spring, and knowing that these had been made in the winter, supposed that they were the work of some squirrel. On the above date, however, curiosity led me to examine several of these structures more closely, and to my surprise, I found that they were the nests of some birds, and had evidently been recently occupied. Compared with the size of the bird that must have built and occupied these hut-like formations, they were large. One which I brought home, measured two feet six inches in circumference; yet the inside cavity was only about four inches in diameter, and the entrance showed that the body of the builder was about the size of that of the pine finch. The outsides of these nests were formed of moss calculated to keep out cold, and throw off the

rain, while the inside was thickly lined with the soft fibrous dry cedar bark, and in some cases, small quantities of hair. The materials of the entrance were of such quality and arrangement as to almost close when the occupant went in or out, and it would appear also that it was the intention of the owners to cover the contents when they found it necessary to leave it for the purpose of procuring food. For a while I was puzzled to know what species of the feathered race had made these nests, and therein reared their young in the midst of our cold and stormy winters. I then recollected and re-read the article in the last February number by Dr. Garnier, on the Crossbills, the mystery was solved. These moss-made hut-shaped structures were the nests of *Loxia curvirostra*. I then recollected that in the winter of 1866, and following years, I had observed these birds in flocks in the barn-yard and among the evergreen woods of North Wallace, where also I first noticed those curious nests, but never thought they were the habitations of birds, or that any bird could rear their young at such a season of the year in our climate. Lately a neighbour informed me that he saw the nest of a bird with four young in the month of March, but could give no information as to the species or formation of the nest. It was, of course, a crossbill. I did not see any of these birds this season, they had evidently departed northward before my advent among their winter homes. I hope another season to see their eggs.

W. L. KELLS, Listowel, Ont.

Sitta Canadensis. When I first discovered the nest of this bird, both male and female were busy gathering soft material to complete their nest; the spot selected for this purpose being a hole in a dead tree, about ten feet from the ground; the hole, however, was not the work of these birds, but one which had probably been made by a squirrel or woodpecker some seasons previous, the cavity being about fourteen inches deep. *Sitta Carolinensis*. As the northern limit of this Nuthatch, as a winter resident, is somewhat indefinite, I might mention the fact that one was taken at Westfield March 10th, 1882.

HAROLD GILBERT.

St. John, N.B., April 23, 1882.

DEAR SIR,—In answer to your query in the March number of the SPORTSMAN AND NATURALIST, concerning the nesting of *Astur-*

tomus vociferus (Bp.), I can say that I have found several nests in the Province of Quebec, in latitude 46° . The bird is quite common in the County of Ottawa, P.Q. Mr. W. P. Anderson tells me that he found both the Whip-poor-Will and the Night Hawk very common in the North-West Territory, some distance north of latitude 49° . Can you tell me whether there is, so far, any record of the Western Grebe (*Podiceps Occidentalis*, Lahr) being taken in Ontario or Quebec? Prof. Macoun, I think, found it north of Winnipeg. Mr. George White, of this city, shot a pair near here last season, but the skins have unfortunately been lost.

W. L. SCOTT.

* Ottawa, Ont. April 26, 1882.

NOTE.—The Western Grebe occurs rarely in the Province of Quebec. I purchased one in the Quebec market.—C.

THE BIRDS OF PREY OF NOVA SCOTIA.

BY J. BERNARD GILPIN, A.B., M.D., M.R.C.S.

He is common, and most probably breeds with us, as he is seen during that season, but I have no note of his nesting. He leaves us during November, the swamps then being frozen, and the mice, reptiles and snakes, his usual food, hibernating. He is seen beating our new mown fields and swamps, but never hunting the shores abounding with shore birds. The females and young are much more abundant than the slate grey male. In his habits he resembles the buzzard, as he does somewhat in bill and claws. In the next family of hawks we have the sharp-shin (*A. fuscus*), Cooper's hawk (*A. Cooperi*), and the Goshawk (*A. atricapillus*). The sharp-shin is, perhaps, our most common hawk. I have noted him in May and in December. Little doubt he breeds with us, though I do not know his nest. Though slenderer than the falcons, his bill lighter, and upper mandible scarcely notched, he is by no means their inferior in audacity and headlong pounce. One broke the glass of Mr. Downs' aviary in attacking a canary, seen through. He will often attack caged birds hanging in country houses, and even enter the city for the same game. Cooper's hawk (*A. Cooperi*), an enlarged model of the last, is very rare. I am indebted to Mr. Egan for notes of one specimen mounted by himself and afterwards sent home to England. I have never seen it myself. The Goshawk (*A. atricapillus*) is common and seen during the

breeding season, though I have no notes of time. A pair wintered near the light-house at Digby Gut, 1880; but this is unusual. The vicinity to the sea would make one suppose they lived upon fish. Few hawks of any species, save eagles, are seen after December, even the fish hawks leave us. One would suppose a duck upon the water would be an easy prey for them, and our winter shores are covered by them; but I have never heard or have read of any hawk making like the fish-hawk what may be called a water pounce. The Goshawk is the type of the great hen hawk of the farmers' wives. He comes out in the open, is not seen beating marshes like the buzzards and harriers, or the sea sands like the smaller falcons, but prowls about the homesteads, coming suddenly with the swiftness of the gale from nowhere, and sweeping a hen or chicken from the very feet of its owner, gone as suddenly as it came, and losing in the deadly rush for a time that caution and wariness which ever keeps him from the vicinity of man. The next Family are the Falcons; a more powerful organisation comparatively; a keener ardor and untamed spirit; the habit of taking their prey with a pounce from a tall tree, or perpendicularly from the air, rather than hunting along the surface; a stronger, shorter, and peculiarly notched bill, and pointed wing, define this family as it were abruptly from the others. It is the type of the highest excellence of the whole order. Of six species inhabiting North America, four are found in Nova Scotia; two probably nesting, the others rare, and as respects the jerralcon accidental visitors. In *F. Sacer* we miss the old name so long given by naturalists to the falcon of antiquity, but bow to the law that gives to the first scientific discoverer (Forster) the right of the specific name. Of this historical bird, the companion and pet of mediæval princes, the subject of the ancient pseudo science of hawking, with all its complex phraseology, I am indebted to Mr. Downs for my sole note. One specimen was mounted by him some twenty years since, being taken by a vessel on the coast and brought to Halifax, and a second specimen is exhibited this evening by him. They are not uncommon at Newfoundland, being called white hawks, and sometimes stray south of us, into New England doubtless taking the inland route. The duck hawk (*F. communis*), and here again we lose the fine old name *peregrinus*, a bold and beautiful bird, with the eye, toothed bill,

and powerful claw of its race in the highest beauty and perfection in my experience, is very rare. There was a good specimen in the Halifax Museum 1870, and Mr. Downs has noted it. This falcon is the *anatum* and great footed hawk of American writers. The pigeon hawk (*F. columbarius*) is perhaps the most common hawk of our Province. My notes are September and November, but still I believe he nests with us or is found during the time of incubation. He is a true falcon, in dash, temerity and force. He will strike a duck upon the wing and lacerate and tear up the whole back and neck region so as to produce death. He occurs here with a variation of colour. In the Provincial Museum are specimens with four obscure whitish bars upon tail. A specimen in Mr. J. M. Jones' collection agrees with this; the bars broader. Another, shot by Mr. Alfred Gilpin, has five white bars, the fifth obscured by tail coverts. Another specimen, shot by John Baxter, Nov. 4th, 1880, has five dark bars crossing the tail, the fifth hid by tail coverts. In this specimen the colour was more plumbeous on back and rump and tail, and more whitish below. I have not specimens enough to show any analogy between the plumbeous coloured back and darker tail bars, and whiter colour below. Cones asserts the female has white bars, Reeks (Zoologist, 1869,) describes it at Newfoundland, as having dark bars. The question is also complicated by Richardson's merlin or *Aesalon* of the old world, very allied to this species, being found in America, though denied by Cones. We find this very active and bold falcon on the flats of the sea shores, pouncing aerially upon the TRINGA, TOTANI and other shore birds in their autumn migration. He lingers into November before he leaves us. There is no prettier sight than on a warm September day, in the Digby Basin, when the great Bay of Fundy tide has filled up to the very rushes the salt water estuaries and creeks; when the peeps and shore birds are like snowy drifts on the edge of the tide, waiting for the ebb; when the herons, coming full twenty miles from their heronry by the forest lakeside, are roosting in awkward groups on the spruce pines and birches overhanging the tideway, also waiting for the ebb; than an instant alarm of shrieks from the herons, followed by an instant barking of the crows, rising and falling about the tops of the pines, disturb you, as floating in your canoe you are watching how a feathery gull, or an early scoter, is breaking the majestic mirror all around you.

Malti Pictou, your Indian, says, "May be herons don't like the hawk"; and then, as you turn your eyes landward, you see the hawk sailing in short circles around and then with a sweep leaping down upon the herons, recovering himself and passing with lazily flap of wing slowly their roosting trees. He, too, is waiting for the ebb. The sparrow hawk (*F. sparverius*) is not rare with us; my notes of him are in September, but Mr. J. M. Jones allows me to say, he has seen them during the summer in the valley of Annapolis, with all the habits of a resident bird, and probably nesting. Its beautiful colouring and bold upright form and audacity makes him everywhere a marked species. Of the next family of buzzards, I have identified three species. This family, more robust than the last and more powerful in form, have less audacity, sitting for hours listlessly on a dead tree, living on the smaller mammals and reptiles which, flying low, they snatch rather than pounce upon, are still audacious plunderers of the farm yard. Of the Red-shouldered hawk (*B. lineatus*) I have only Mr. Downs' notes. I have never seen it. The winter falcon (*A. lagopus*) is seen rarely here. A specimen in the Halifax Museum agrees with Richardson's figure and description, the colours scarcely so bright. I saw one specimen of a black hawk in Mr. Roue's collection, at Halifax, 1870. It was alive and therefore could not be examined closely, but it looked so very unlike, in size and figure, the *lagopus*, that I could scarcely call it a nigritism of that bird. But still I have nothing explicit enough to call it a true species, especially as the best writers unite in not considering it such. I can not but think there is a lost hawk in this family. The Red-tail hawk (*B. borealis*) is a common hawk with us. My notes give him the middle of April, Summer and November resident, but leaving us in winter. Our specimens, in the finest nuptial plumage, differ from Richardson's description both in the colour of tail and breast. They have very much more brown and ferruginous on breast, and the tails of the brightest chestnut red, the two outer tail feathers obscurely barred. Richardson says of his specimen, killed at Carleton house, May, 1827, "The tail is brownish orange, tipped with soiled white, with a subterminal band of blackish brown there are also traces of thirteen other brownish bars."

(To be continued.)

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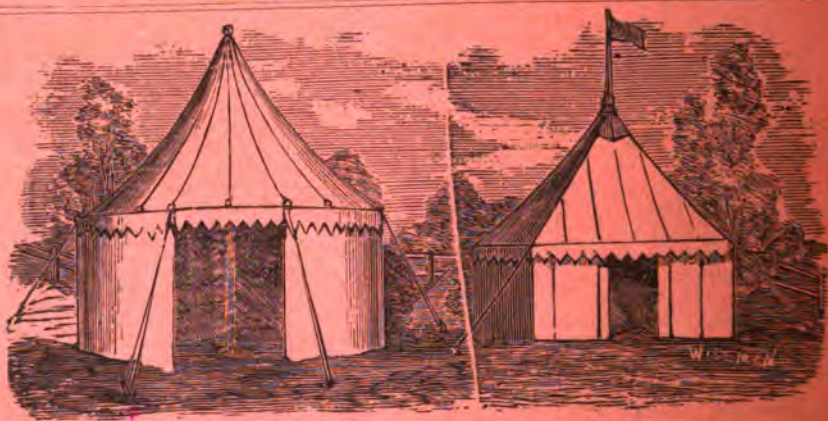
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1882.

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MONTREAL, AUGUST, 1882.

VOL. II.

WILLIAM COUPER, Editor.

THE INTERNATIONAL FISHERIES EXHIBITION.

This Exhibition will be opened on the 1st of May, 1883, in London, England, and will remain open for a period of six months. The principal objects to be admitted are all kinds of specimens of fish-life, and to illustrate all the modes by which the Marine and Fresh-water animals of economic value are captured and utilised, together with the commercial, scientific, social, historic and legislative aspects of such fisheries.

The United States Congress have lately voted \$50,000 in order that fishing industries carried on by the American people may be properly represented. Our neighbours say that the amount invested by them for the Berlin Exhibition, was money well spent, and they are determined not to be behind in a show of this nature, especially when it is patronized by our beloved Queen and the male portion of the Royal family, also by foreign Princes and all the noblemen of the British nation. The Right Hon. Sir John A. Macdonald, K.C.B. Premier of Canada, represents our Dominion, as a Vice-President and member of the General Committee.

There is a Fisheries Department at Ottawa, and its Chief is a Council Minister; yet up to this instant, nothing has actually been done to illustrate in London next year, products from our great lakes and rivers throughout this vast Dominion. The Exhibition was in prospect months gone bye, and to-day we find the men in charge of our Fisheries only commencing to procure material when the season is almost past. There are a few *pseudo* naturalists connected with the Government who seem to have all this kind of business arranged in their own way, and large sums of money is

expended from year to year on experiments that never return a cent into the Exchequer. We know that Mr. S. Wilmot of Newcastle, O. has done his share to make a successful show, but some one in the Department is to blame for procrastination and want of energy. When Mr. Wilmot exhibited his fishes at Ottawa, the Editor of this Journal competed with a collection of stuffed Food-fishes from the Province of Quebec; many of the latter species were different from those exhibited by the former gentleman. The Quebec Fish collection was offered to the Fisheries Department, at a reasonable price; the offer being made through Mr. Whitcher, who knew that the lot was a bargain, and by his request, they were packed and left in Ottawa, to await a reply from the Chief of the Department. Some days afterwards an answer was received that the Department had no money to purchase Stuffed Fishes, and the collection was brought back to Montreal, where it was immediately purchased by Dr. Sterry Hunt and presented to McGill College Museum. Mr. Wilmot endeavoured to induce Mr. Whitcher to purchase the collection, and probably they now regret not having secured it. A second collection was started by the same hands, which was exhibited at Mile-end, Montréal. The officers of the Fisheries Department were cognizant of this exhibit, but made no effort to secure it; therefore a part of it is now in McGill College Museum and the remainder was purchased by the Rev. C. J. S. Bethune and belongs to Trinity College, Port Hope, O. Now, the result is that these specimens are not available for loan, and from want of foresight much of the material which would represent the Food Fishes of the Province of Quebec, cannot now be obtained in time to be represented in the London Exhibition. If our Fisheries Department is to be a live Canadian Institution,

we want a long-headed, pushing man like Prof. S. F. Baird of Washington. A writer in the St. John (N.B.) *Sun*, seems to know more about our native food fishes, than the men at present in office. The Fisheries Department should be allowed facilities to form a museum of animals of economic value, coming from our marine and fresh waters, with the same opportunity to display objects of this kind here and abroad, as are extended to the Geological Museum. By the way, what are the naturalists connected with the latter institution doing? Why cannot one or two of them be sent to help Mr. Gregory down the Gulf? One man can do very little work in so short a time, especially on a steamer, and where is he to procure the material? It is absurd to send a man on an expedition of this kind. A good Taxidermist should have at least two assistants, besides means of procuring specimens. What has become of the objects collected in the deep sea dredgings in the Gulf? A schooner was employed to cruise in the Lower St. Lawrence, and it had a good crew to assist the dredging party, but something should be shown for the outlay. The Department of the Interior should also be at work. It has as much to do in procuring material for the coming Exhibition as a similar Department in the United States. Manitoba and the N. W. Territories have been represented; in fact the fish products of the latter regions are not even known in Ontario or Quebec. If we discover that the naturalists of the Geological Survey are lacking in energy, then something further must be said. The above statement is made that the public may learn something in regard to matters of this nature. The Montreal *Star* stated lately that Canadian museums had nothing Ichthyological to send to the London Exhibition. The writer made a mis-statement, as we know that Toronto University Museum contains a fine Canadian collection of Fishes and Reptiles. Laval University has quite a number of stuffed food fishes in its museum, and the

Literary and Historical Society of Quebec possesses a fair fish exhibit. The Natural History society of Montreal has a very good collection of the same material, and if the above institutions wished to send their combined collections to England, the total would be larger probably than that to be brought together by Scotland and England. But museum collections are not loaned, especially to go out of the country. We know a gentleman who has had experience of this kind; he made a loan of stuffed fishes for the Paris Exhibition; they were not returned, nor never will be. The fact is, they were supposed to be Government property, and it is therefore probable that they are at present in a French or British Museum.—C.

FISH-BREEDING IN CANADA.

We have before us, "The Daily Sun," St. John, N.B., containing over five columns of a review on Superintendent Wilmot's Report on Fish-Breeding. The writer in the *Sun*, although well posted in Ichthyology, comments rather severely, in fact spitefully against Mr. Wilmot's efforts to hatch fish. The reviewer charges as follows:—That "he (Mr. W.) failed in his quixotic enterprise;"—giving "glowing accounts in his characteristic style of florid description and incorrect statement;" that he kept "salmon stored up from July until November in that cesspool, the Carleton mill-pond, into which the sewerage of a large part of Carleton is drained," and further "that the Government has been paying vast sums of money in teaching this blunderer his science." The reviewer in the *Sun* has a perfect right to make a clean dissection of Mr. Wilmot's report, but when an attack is made upon a man's energy to develop and increase food fishes for the rich and poor of Canada, we think it is unjust to use such harsh language. Mr. Wilmot honestly states that he has failed in breeding *Salmo salar* on the borders of Lake Ontario, and he gives the cause. In fact, we were almost certain that the hatching of the latter species, so far inland, would ultimately fail. The Fisheries Department are greatly to blame for allowing so many stake-nets to block up the entrances of rivers. If salmon and trout are to be

caught by wiers and stake-nets, the latter should be placed one mile at least from the entrance of all the rivers, in order to keep the tide-way clear for the fish to reach the pools and spawning grounds. We believe also that the money spent in building fish hatcheries and maintaining officers, could be better and more profitably expended in improving the rivers and paying guardians or preventive officers to stop Indians and others from spearing salmon while depositing their ova. It is in these interior places that houses and officers are required. Leave nature to do its work, and place guardians on the spawning-grounds to prevent the fish from being disturbed, and doubtless a change for the better will soon appear. Parties renting a river, should be compelled to guard the estuary, seeing that the nets are properly placed, and the meshes of legal size. If this is done, we will hear of salmon becoming abundant—the fly fisher and net owner will have their share. The Government may do with the hatcheries what they think proper. We are satisfied that if salmon are not interfered with on their spawning-grounds, that more healthy fish will return to the sea from the natural hatchery than from the artificial one.—C.

BLACK BASS AND PIKE-PERCH.

We have had verbal accounts from various localities relative to inland fishing this season. Good sized Black bass and Pike-perch (Doré) are evidently abundant in some of the Quebec rivers, but especially the Canadian waters of Lake Champlain. Early in the season, Bass were found occupying grounds wherein schools of minnows occurred about sunrise. Sportsmen discovering the fish thus situated were then generally successful in taking Bass with a fly resembling a grasshopper. Black Bass are, at certain seasons, gregarious, following a leader, in the chase of small fishes; it is astonishing how Bass manages to secure sufficient of these small quick swimming fishes, but they do destroy numbers of them daily. All the species of fresh-water and marine Bass are truly carnivorous, preying on the weaker forms occurring in the same waters. We have opened the stomach of a large Sea Bass, sent to us from St. John, N.B., which contained thirteen adult herrings. Sometimes Black Bass have the same inquisitive nature noticed in the salmon and trout,

by rising to the artificial fly, when the colours of the latter attract its curiosity. Bass do not generally go in schools; but later in the day when the sun shines warmly, they separate retiring under the shade of aquatic plants or to rocky cavities, resting till after noon, when they return to deep water in search of food. Pike-perch (Doré) are ravenous feeders, especially in the morning, when they are in cool shallow water. At noon they do not, as a rule, seek the shade of plants, but move to deep water or a current in which to rest at a convenient depth, ready to devour any small fish passing or approaching them. The habits of Pike-perch are not unlike the common Yellow Perch when the latter attain adult form, it becomes a deep water wanderer, particularly where there are large ponds surrounded by marshes. This accounts for one making a good day's fishing over a certain ground, while the following day, the same place may turn out poor. There is therefore two portions of the day—morning and evening—that these fishes are on the move. Many persons who go fishing, return home either disheartened or disgusted when they meet with bad luck, often under the impression that no fishes were in the water, while in fact they were there—on their resting-grounds—but difficult to discover. A good indication of the presence of large fish, is in noticing minnows leaping over the surface of the water; the enemy is beneath them, and it is generally in the neighborhood of such places that large Bass, Pike-perch, and Maskalonge are to be found. We make these few remarks to give encouragement to the disappointed fisherman. Go to the same place again, and with a little experience, success may be the result.—C.

A PRIME FISH.

Mr. M. Wright, proprietor of the Cottage Saloon 74 St. Urban street, Montreal, while trolling for fish on the south side of the St. Lawrence, near the foot of Lachine Rapids, struck a large Pike-perch (*Lucio-perca Americana*) commonly called Doré in this Province. His tackle consisted of a good silk line, rod and reel. The bait being Westwood's No. 4 gold and silver spoon; its concave side is red. The fish is 34 inches long, with the following circumference:—before pectoral fins 16 inches; centre of body 18 inches; front of anal fin 14 inches. Weight 13 lbs. Attached to the

little spoon are treble hooks of small size, trimmed with red, white and peacock herl. Mr. Wright played this fish for half an hour, and we look on it as a prime adult female *Doré*, of whose capture any sportsman would feel proud. It is to be stuffed for Mr. Wright.

LEMOINE'S BOOK ON ORNITHOLOGY.

J. M. LeMoine, Esq., of Quebec, is collecting material for a second edition of his French work on Canadian Birds. His aim is to produce a book which will be popular among students in seminaries, &c. There is no doubt regarding our esteemed correspondent's ability to write a scientific and agreeable treatise on our birds, and we wish him every success.

Correspondence.

LYNX RUFUS.—THE RED LYNX.

MR. EDITOR.—It gives me much pleasure to read the remarks on the Canada Lynx in your issue of June last. Having studied the subject, I wish to make some observations on the courteous notes referred to. What I understand the Peninsula of Ontario to be, is that portion west of a line drawn from Toronto northward to the south-eastern limit of the Georgian Bay. I have to-day sent down a typical specimen of *Lynx rufus*. Although I have obtained a few larger, the one sent by express, is a fair-sized animal. It weighed thirty-five pounds. Along with it you will find five skulls of different sizes; the largest is of an adult that weighed sixty-eight and a-half pounds. It was wounded with No. 5 shot about the end of January, but escaped; it was, however, found dead in March, 1879, and the skull is before you. I have trapped several of these animals, and handled dozens of their skins—young and old—in this section of Canada, and I never saw any variety but the one sent for your examination. I have long been of the opinion that these two varieties—species if you will—are one and the same; that *Lynx Canadensis* is merely a more northern form of *Lynx Rufus*; the varieties being produced by climate and food. This happens to other fur-bearing animals whose pelage is less developed in the south, and this causes much difference in color and general external appearance. I have before me Professor Jordan's "Manual of Vertebrates," and I give

the relative description of the two species side by side with my own observations in *italics* so that a comparison can be made without difficulty:

LYNX CANADENSIS.

LYNX RUFUS.

- | | |
|---|---|
| 1. Feet very large, densely turred beneath in winter, concealing the small naked patches. | 1. Feet not so much furred. "How do they differ in summer? They leave a very large track on the snow." |
| 2. Tail black at tip. | 2. Tail with black patch at the tip preceded by half rings. "In the adult these rings disappear, and are sometimes much more distinct in the young." |
| 3. No distinct bars on inner sides of legs. | 3. Inner sides of legs with dark cross-bars. "These are well-marked in the young but less so in the adults, and frequently there are none to be seen at all, <i>pure white</i> ." |
| 4. Much larger than next with larger feet and longer. | 4. Smaller—Less feet, less fur. |
| 5. <i>Habitat</i> —North America. | 5. <i>Habitat</i> —United States and Northward. |

In the specimen sent, there are merely blotches on the inner hind legs; the bars on fore legs are indistinct and mostly covered with white long fur that has to be separated to make them perfectly seen. There is a full tufted belt of long fur round the throat which, in old specimens I have seen very much larger. The ears are slightly tufted, but I have seen them more so, and over an inch of full percelling on tips. It was shot in Kent Co. by Mr. Thos. Dusten, who kindly forwarded it. When in the flesh, the animal measured forty and a quarter inches from nostril to tip of tail. The specimen is, I think, about two years old, but a fair sample, although not adult. The largest skull belonged to an old male *L. rufus* which measured forty-nine and a-half inches from the nose to tip of tail. At first sight it may appear that the smaller skulls belong to a different species on account of the greater proportional development of the cavity of the

skull, but this is not so. I shall be glad to have information of the anatomical difference that is noticed in the osseous development and structure of the cranium, to develop distinct species. There is nothing in the descriptions of Jordan to prove anything specific, or that might not be produced by a high northern habitat. The greater quantity of fur on the feet and longer body fur generally point to the animal's geographical range. The dark spots are, I consider, from the appearance of the Lynx in early life, and these will naturally fade in a cold climate. They are carnivorous, but the difference in quality of food in both species must vary between Labrador and South Ontario. Yet the size of mature forms appear to be the same, and I aver having shot and trapped *L. rufus* over sixty pounds. The largest, I can attest was sixty-eight and a-half pounds; others killed far in the interior of the bush, were certainly as heavy. I have seen many much larger than the one killed by Mr. Dusten, near Wallaceburgh—in fact, various sizes above the kitten of a few pounds weight,—the latter are always distinctly marked with spots. Lynx generally hunt in pairs at a considerable, although convenient, distance apart, in spaces between two hundred yards and half a mile in order to head off their quarry. When in full cry, they give two quick yelps successively, followed by an unearthly scream while running with great rapidity. I have often heard them thus when the snow was two or three feet deep, and as many as six of the animals giving tongue in different directions. An unpractised ear might easily mistake them for the howls of a pack of wolves in full cry at night. They may be considered outlaws with bears, skunks, wolverines, *et hoc genus omni*; are very destructive to fawns, rabbits, lambs and poultry; they also destroy numbers of ruffed grouse on their nests, or in winter when the birds are buried at night in the snow, and I have seen the fatal traces on more than one occasion, where a Lynx or a Fox thus secured a supper. I shall be happy to procure a true *Lynx Canadensis* captured anywhere in Ontario, especially in the Peninsula, taken any time between the 15th of November and 12th of April. This will settle all disputes, and I will pay a reasonable price and carriage with pleasure. The spoor of the Red Lynx is large on snow, and although the feet are not so densely furred as its northern relative, the foot impression of *rufus* on the snow looks large and round in proportion to the size of the feet

of the animal in the dead state. They become fat at certain season, and they are eaten by Indians who pronounce them good. The *L. rufus* is at maturity when it passes its fourth year. The specimen sent is nearly adult; its sharp teeth and medium size are my proof, together with the semi-rings on the tail, now disappearing; also the black marks on under parts of body, which are much less in adults, and are frequently altogether absent or obliterated. It is easily trapped, not being very shy; nor has it the cunning of a Fox. When hunted by man alone, or by the latter with dogs in the forest, it takes to a thicket, being a nimble climber; cat-like, resting a short time on each limb. The ears are sharp, the tympani sensitive, and when danger approaches, it springs from tree to tree like a squirrel, sometimes leaving its pursuers hundreds of yards behind. The old trapper or Indian understand the feline tricks of the Lynx. I have followed and shot one that went nearly a quarter of a mile in this manner, hiding himself as a last resource, in a dense hemlock tree, forty feet above the ground. This is simple work after a fresh fall of snow. You have merely to mark carefully the first tree he mounts, as at its base, you will notice bits of twigs, moss, &c. on the fresh snow. As he springs away, he leaves additional marks which he throws down in like manner, but more scattered. By following the debris a broad trail is visible. It is with greater facility followed in a swamp, than in open ground, because there is generally more broken material thrown down, and the animal is easily detected. The Red Lynx springs easily from sight to fifteen feet, perhaps more. Once only during my hunting trips, I noticed a Lynx take a long spring from tree to tree. An Indian and myself chased it with two dogs for over three miles. The aborigine pointed the Lynx preparing to spring from a branch of a tree to another at least sixty feet from the ground. The extremities of the branches were three or four feet apart. The animal did spring and certainly cleared sixteen feet, but no more. Now, let any one of your readers consider how far the space is in mid-air, from that portion of a limb capable of supporting forty-five or fifty pounds of live Lynx throwing himself to an opposite branch of similar strength. Let one consider the muscular force and accuracy of eye required by the animal to reach the object of escape. The young *L. rufus* in my opinion approaches Jordan's *L. Canadensis*. Mr. Henderson found

it near Lucknow, and I had the pleasure of receiving it from him. They (the old ones) are very shy during the breeding season, after constructing a bed in a hollow log or some secluded place. On one occasion, in July, many years ago, I was in Turnberry Swamp looking for pigeons. I had a dog wandering about with me, and he gave tongue at some distance; it was near sunset and I hurried towards the place, thinking he had attacked a Porcupine. On arriving where the dog was, I saw a large Lynx and two young ones (kittens) which on my approach, entered a hole at the base of an elm tree, before I could cover them with my rifle. The old one made frantic charges at the dog which I called away from the contest, and after I closed the hole with fallen limbs, to keep the party secure, I went home. Early next morning in company with a neighbour, the place was visited, but to our astonishment a hole was opened in another place at the base of the tree, and the Lynx and kittens gone. I give a short account of the skulls of *L. rufus* sent to you for inspection, all of which were killed within a few miles of this place.—

No. 1—Adult male, shot by me in January, 1879. Length 49½ inches. Weight 68½ lbs. This was one of the largest I met with, and am sorry to have lost the skin.

No. 2—A female. I presume three years old. Weight 53 lbs; Length 48 inches. Shot February 23, 1882, by Mr. Alfred Haldingby of Culross Township, Ont. In this instance also I lost a very fine specimen.

No. 3—Young female trapped and shot in the head by Mr. Sutherland Taylor, 1878, in Wawanosh Township, O. Length 38 inches; Weight 30 lbs.

No. 4—A young male, shot by Jos. Henderson of Lucknow, O., who gave me the animal fresh. Length 38 inches; Weight 25 lbs.

No. 5—Young male, shot by myself, on December 1, 1881, in Ashfield Township. Weight 27 lbs. Length 37½ inches.

In the last three the symphysis and the sutures are not solidified. They are therefore the skulls of young *L. rufus*.

I sincerely hope this may draw forth the opinions of others on the Lynx forms occurring in Canada, I trust moreover that a valuable periodical like "The Canadian Sportsman and Naturalist" will soon have means to illustrate subjects of this description.

J. H. GARNIER, M.D.

Lucknow, Ont.

NOTE.—We have received the specimens sent for examination. The adult skin and the stuffed kitten are specifically *L. rufus*. The whole of the skulls belong to the latter species. Our correspondent quotes Jordan's Manual of Vertebrates to distinguish between *L. Canadensis* and *L. rufus* which comparatively we consider very vague. Independent of the permanent marks and general colour of *L. rufus*, when the Dr. has an opportunity of comparing *L. Canadensis*, he will discover that the latter is a true and well defined species. It is futile to deny the occurrence of the two species in Ontario. Without giving the osteology of the animals, we may state positively that they are not alike. First in an exterior view, we notice that the marks behind the ears of the kitten of *L. rufus*, are permanent in the adult. The Dr. has overlooked these evident specific marks which do not occur in *L. Canadensis*. A frigid climate will doubtless alter the exterior markings or colour of animals unused to a low temperature. We know that a coolie dog when taken from Scotland to an Arctic region, there to remain for three years, causes the animal to erect its ears and change colour but the osseous parts are still those of a coolie. Exposure to a frigid pressure is even remarkable in the human form, when subjected to the same influence. We have no space to go further at present, but in the meantime the subject can be looked into by our readers who may give additional light on it.—C.

RARE BIRDS IN ONTARIO.

SIR,—Having read with much pleasure, in your valuable journal, accounts of other collector's experiences in the Ornithology of our country, the thought struck me that some of my notes might be acceptable to you. During this Spring, from 8th April until 23rd June, I, in company with my assistant, were collecting at Mitchell's Bay, and adjacent marshes, where we preserved over one thousand four hundred specimens of birds, fish, reptiles and birds eggs; but the bird that

astonished us most by its numbers, was the Lapland Bunting or Longspur (*Plectrophanes lapponicus*). The inhabitants told us they occur there every winter, and are called by them the black or dark Snow-bird, but to us they began to appear about the 17th of April. First we observed three flying over us as we were tramping the marshy shore in search of desirable species coming in our way. The Buntings were leisurely flying eastward, constantly uttering notes differing somewhat from those of the Snow Bunting (*Plectrophanes nivalis*) being harsher and in a different tone. The following Sunday, April 23rd, I was reading in the house of our host, when my assistant returned from a walk on the shore; he informed me that he noticed a flock of about two hundred birds which were strange to him, and very remarkable by their black throats. When these birds alighted on the ground, a person could walk into the midst of the flock, within six feet of many of them, but on the least noise being made, they would become alarmed, rising in a circular manner to the height of about seventy feet, and for a time disappear. We saw flocks of from six to one hundred and fifty almost daily until about the 20th of May, when they left us altogether. The specimens shot at the latter date were invariably females, but we succeeded in collecting about sixty, many of which are beautiful adult males. Why do not these birds occur at or near Hyde Park or London, while they are so abundant at Mitchell's Bay? I presume they follow the shore of lakes, therefore passing over the latter places; at all events I have not hitherto heard their notes, although collecting birds in the neighbourhood during the last seven years. I had a single specimen in my collection and looked on it as rare until this Spring. It was shot near St. Thomas, Ontario. The song of the Lapland Bunting is very similar to that of the Purple Finch (*Carpodacus purpureus*), and they were in full song after we noticed them. We collected one specimen of the Cape May Warbler (*Dendroica tigrina*) which is the first I have seen in this region.

JOHN A. MORDEN,

Hyde Park, Ont., July 1882.

NOTE—We have no record of the occurrence of the Lapland Bunting in the Province of Quebec. The Snow Bunting (*P. nivalis*) is frequently accompanied in early Spring with

the Shore Lark (*Eremophila cornuta*). The latter is abundant on the Labrador coast flying in flocks in Spring. The inhabitants say they make an excellent pie.

DEAR SIR,—C. J. G. Fraser writes in July, about *Anthus ludovicianus*, and from various reasons I think the bird is the Shore Lark (*Eremophila cornuta*). The Lark is common here through the summer, while *Anthus ludovicianus* only occurs during the migrations and then sparingly. Shore Larks almost always breed on commons where cows feed, and their nests are generally placed in a small hollow on level ground. That is the single difference between C. J. G. F.'s account of *ludovicianus*, and my observations of *cornutus*. I have often seen the latter rising in flight, singing its "sweet note," until it reaches a height of "perhaps fifty feet," when suddenly closing its wings, it drops perpendicularly till within about twenty feet of the ground. Generally, however, the bird mounts much higher, often so high that, lying on my back on the ground, I have had some difficulty in following its flight; probably the distance would be about two hundred yards. Mr. Fraser was evidently a tyro in Ornithology at the time of his observations, confounding two birds which to-day he would at once recognize as distinct species. Query.—How far east have Orchard Orioles reached? They are very common in Kent County, not rare here; a small number breed, but I have not heard from further east.

Yours truly,

W. E. SAUNDERS.

London, O., July 22nd, 1882.

COLEOPTERA FOUND IN THE PROVINCE OF QUEBEC.

By WILLIAM COUPER.

- BEMBIDIUM 1 paludosum, Panzer.
 2 inaequale, Say.
 3 chalcum, Dej.
 4 nigrum, Say.
 5 simplex, LeConte
 6 lucidum, "
 7 semistriatum, Hald.
 8 rupestre, Dej.
 9 patruelle, "

- BEMBIDIUM** 10 *variegatum*, *Say*.
 11 *versicolor*, *LeConte*.
 12 *fontale*, "
 13 *4-maculatum*, *Linne*.
 14 *bimaculatum*, *Kirby*.
 15 *impressum*, *Gyll*.
 16 *transversale*, *Dej*.
 17 *incrematum*, *LeConte*.
 18 *diadatum*, "
TACHYS 1 *nanus*, *Schaum*.
 2 *flavicauda*, *Say*.
 3 *incurvua*, "
HALIPLUS 1 *triopsis*, *Say*.
 2 *immaculicollis*, *Harris*.
CNEMIDOTUS 12-*punctatus*, *Say*.
AGABUS 1 *tristis*, *Aubé*.
 2 *punctulatus*, *Aubé*.
 3 *semivittatus*, *Lec*.
 4 *punctatus*, *Mels*.
 5 *hypomelas*, *Mann*.
 6 *bifarius*, *LeConte*.
 7 *sinbriatus*, "
HYDROPORUS 1 *conoideus*, *LeConte*.
 2 *spurius*, "
 3 *modestus*, *Aubé*.
 4 *puberulus*, *Lec*.
 5 *catascopium*, *Pay*.
 6 *similis*, *Kirby*.
LACCOPHILUS *maculosus*, *German*.
COPTOTOMUS *interrogatus*, *Fabr*.
MATUS *bicarinatus*, *Aubé*.
COLYMBETES 1 *biguttulus*, *German*.
 2 *binotatus*, *Harris*.
 3 *sculptilis*, "
 4 *4-maculatus*, *Aubé*.
 5 *picipes*, *Kirby*.
 6 *agilis*, *Fabr*.
ACILIUS *fraternus*, *Lec*.
DYTISCUS 1 *confluens*, *Say*.
 2 *Harrisii*, *Kirby*.
 3 *verticollis*, *Say*.
 4 *Cordieri*, *Aubé*.
 5 *fasciventris*, *Say*.
GYRINUS 1 *ventralis*, *Kirby*.
 2 *fraternus*, *Couper*.
 The type of this species is in the collection of
 Laval University, Q.
DINEUTUS 1 *Americanus*, *White*.
 2 *discolor*, *Aubé*.
HELOPHORUS 1 *lacustris*, *LeConte*.
 2 *scaber*, "
 3 *lineatus*, *Say*.
HYDROBIUS 1 *tumidus*, *LeConte*.
 2 *digestus*, "
 3 *globulosus*, "
 4 *regularis*, "
 5 *fuscipes*, *Curtis*.
 6 *subcupreus*, *LeConte*.
 7 *despectus*, "
HYDROCUS *squamiter*, "
HYRÆNA *Pensylvanica*, *Krizenwetter*. *Rare*.
HYDROPHILUS 1 *triangularis*, *Say*.
 2 *lateralis*, *Fabr*.
 3 *glaber*, *Herbst*.
 4 *mixtus*, *Lec*.
HYDROCHARIS *obtusatus*, *Lec*.
BEROSUS 1 *striatus*, *Say*.
 2 *peregrinus*, *Herbst*.
LACCOBIUS *agilis*, *Randall*.
PHILIDRUS 1 *cinctus*, *Say*.
 2 *sinbriatus*, *Mels*.
 3 *teraceus*, "
CERCYON 1 *posticatum*, *Mann*.
 2 *unipunctatum*, *Linn*.
CRYPTOPLEURUM *vagans*, *Lec*.
NECRODES *surinamensis*, *Fabr*.
THANATOPHILUS 1 *laponica*, *Herbst*.
 2 *marginalis*, *Fabr*.
NECROPHILA *peltata*, *Lec*.
SILPHA *inequalis*, *Fabr*.
NECROPHORUS 1 *marginatus*, *Fabr*.
 2 *pustulatus*, *Herschel*.
 3 *orbicollis*, *Say*.
 4 *lunatus*, *Lec*.
 5 *Savi*, *LaPorte*.
 6 *velutinus*, *Fabr*.
 7 *pigmeus*, *Kirby*.
 8 *mortuorum*, *Fabr*.
 9 *Melchimeri*, *Kirby*.
CATOPS *opacus*, *Say*.
ANISOTOMA *collaris*, *LeConte*.
LIODES *dichroa*, "
AGATHIDIUM *oniscoides*, *Beauvais*.
SCYDMENUS *rasus*, *LeConte*.
TYRUS *humeralis*, "
FALAGRIA 1 *dissecta*, *Erichson*.
 2 *venustula*, "
HOMALOTA *plana*, *Gyllenhal*.
ALEOCHARA 1 *fuscipes*, *Fabr*.
 2 *lata*, *Grav*.
 3 *limaculata*, *Fabr*.
COPROPORUS *ventriculus*, *Kraatz*.
 (To be continued.)

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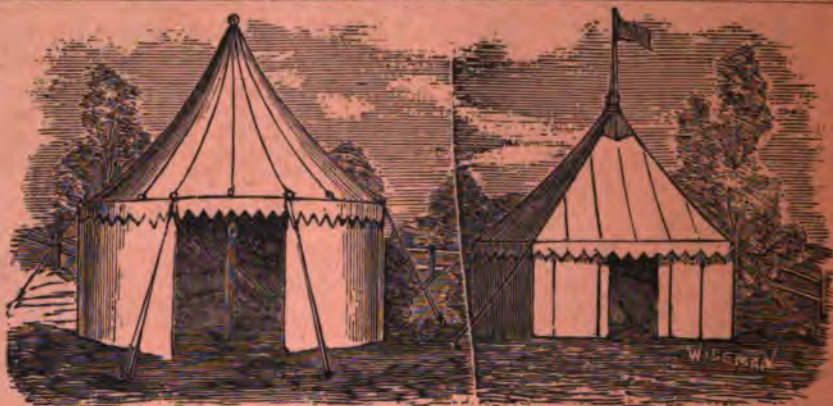
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No. 12.

MONTREAL, DECEMBER, 1882.

VOL. II.

WILLIAM COUPER, Editor.

EDITORIAL NOTES.

A beautiful young specimen of the rare Least Auk (*Cicéronia pusilla*), was sent to Montreal to be stuffed. It was mailed a short time ago from Newcastle, N. B., by R. Mackenzie, Esq.

A fine young specimen of the Solan Goose or Gannet (*Sula bassana*) was lately shot by Mr. A. W. Barnes of this city, in the St. Lawrence, near Contrecoeur.

Last August, Baron de la Grange, of Paris, accompanied by Mr. N. A. Comeau of Godtout P.Q., went on a hunting tour through Wyoming and Montana. They had good sport, having killed two grizzlies; thirty-eight buffalo; fifteen wapiti; seventeen black-tailed deer; eleven antelope; five mountain sheep and some smaller quadrupeds. The Baron has several wapiti and other deer heads and skins as trophies.

During this season, Mr. L. A. Boyer, of Montreal, shot young Eider duck (*Somateria mollissima*), near Summerstown, Ont. It is unusual to find these birds so far from the sea. He has had a pair preserved and stuffed. Those birds may possibly be the young of *S. Dresseri*, Sharpe, Ann. Mag. N. H., 1871, figs. 1 and 2. The true Eider has only lately been detected in America, it being the form found by Mr. Kumlien breeding abundantly on the west side of Cumberland Gulf.

AN ENGLISH WOODCOCK SHOT AT CHAMBLY, QUEBEC.

A specimen of the English Woodcock (*Scolopax rusticula*), was shot on the 11th ultimo, by a French Canadian at Chambly, P. Q. Colour, size and weight of the bird confused the man, who carried the stranger to Mr. Brock Willett, who knew what it was, but he became incredulous—as we did when it was brought to us in the flesh—that a fat twelve ounce European Woodcock could be obtained in Canada, in November; but its freshness settled the doubt, and the bird is now stuffed.

We believe this is the first specimen shot so far inland in Canada. The other record of a specimen occurring far north on this continent is one taken in Newfoundland in 1866. Dr. Coues in "The American Naturalist," X., No. 6, June, 1876, p. 372, records one specimen as having been shot in Virginia, U. S.

DUCK FEEDING GROUNDS.

"A deputation from the Fish and Game Protection Club, consisting of Messrs. L. A. Boyer, Rintoul, Selkirk Cross, and W. Parker, waited on the Provincial Premier while in Montreal last month, to request a grant of \$250 for the sowing of wild rice in the different duck feeding grounds throughout the province. The deputation was very politely received and their request granted by the Hon. Premier. The grant is to be added to the sum of \$100, which the Club guarantees to raise from amongst its members. It may be mentioned that this can hardly be called a tax upon the province, as the law passed last session compelling strangers to take out sporting licenses has already resulted in the netting of a considerable sum to the province, and which will annually increase, as the sporting grounds are protected and improved."

NOTE.—If wild rice turns out productive in this latitude, several of our lakes and ponds will doubtless have an annual tenfold increase of wildfowl, and the sportsmen of the Province of Quebec will not hereafter complain of having to leave their old hunting grounds in search of game elsewhere. This aquatic plant was sent broadcast into the Canadian waters of Lake Champlain about twelve months ago, and we have been informed that it was coming up last spring. The Fish and Game Club should select good natural localities for the propagation and extension of the seed.

THE WINCHESTER CLUB.

A club has just been organized for the purchase of the hunting grounds in the county of St. Maurice. Besides acquiring some of the bush land about St. Elie, on which a sports-

man's lodge will be built, the club proposes to secure fishing and shooting rights over other land in the county, and will engage in the propagation of fish and preservation of game. The proposed site of operations has been one of the richest hunting and fishing grounds in the province, and with two years protection, the club hope to be able to re-stock the rivers and forests of the county. Salmon will be introduced into some of the rivers. Messrs. W. Skillings, of Bethel, J. P. Spaulding, of Boston, Romeo H. Stephens, of St. Lambert, Sheldon Stephens, of Montreal, and W. H. Parker, St. Elie, have been elected a provisional board of directors. The club will seek incorporation at the next session of the Provincial Legislature, under the name of the Winchester Club, with a capital of \$6,750 divided into thirty shares.

NOTE.—There are good names connected with the above Club, and we will use our influence to make it a success.

ANSWER TO CORRESPONDENT.

John H. Morden, Hyde Park, Ont.—Write to S. E. Cassino, 299 Washington St., Boston, U.S. He is the publisher of the "Naturalist's Directory," in which you will find the addresses of the most prominent Taxidermists on this continent. You must send two dollars for the work.

Correspondence.

DEAR SIR,—On page 170 of your Journal you say in answer to a correspondent, that "three other species, viz:—the Scarlet or Swamp Maple (*Acer saccharinum*); the Sugar or Rock Maple (*A. nigrum*) are used "as ornamental trees in the neighbourhood of "Montreal." Permit me to point out that you only mention two species in addition to *A. dasycarpum*, and that the Scarlet or Swamp Maple is *Acer rubrum*, the Sugar or Rock Maple is *A. saccharinum*, and that according to Gray, *A. nigrum* is only a variety of *A. saccharinum*.

Yours truly,
H. H. LYMAN.

NOTE.—Our correspondent is correct regarding the above maples. A mistake occurred in the specific names; the Soft or Swamp Maple should be *rubrum*, and the Sugar Maple *saccharinum*; the *nigrum* referred to in our article is a variety of the latter.

MY BARK CANOE.

Fresh from the dusky Indian's hand,
I launched thee on the pebbly strand
Ten years ago; tight, trim and new,
My buoyant, light-built bark canoe,
No white man's hand could fashion thee.
Thy perfect lines curved gracefully;
"A thing of beauty," through and through,
Wert thou my matchless bark canoe!

Oft o'er the Ottawa's rippling swell
I journey'd in thee safe and well;
Steady wert thou as any rock,
Resisting the explosive shock
Of "Faugh-a-Ballagh's" roaring ring.
At swift, black duck upon the wing—
From thee the "chilled" went always true,
My staunch, my beautiful canoe!

Upon thy ribs red stains I see,
Each is a record plain to me
Of scenes gone by—each crimson spot,
A witness of some long range shot,
There lay the quarries side by side,
Arrested in their plumaged pride;
Delightful to a sportsman's view,
My beautiful old bark canoe!

Some killed at eighty yards and more,
Have stained thy sheeting with their gore:
The mallard in his headlong flight
Hurled quivering from his airy height,
The gorgeous wood-duck, and the teal—
The strong merganser's wings of steel;
The golden-eye, whose whistling wing
Made Nova Zembla's inlets ring.
Each shattered fell, pierced through and through
To freight my beautiful canoe.

The stately pintail there has lain,
The black duck and the red-head slain—
The bluebill and the buff-head.
There stretched beside each other dead—
The graceful white-crested merganser—
The wild goose—Canada's great answer—
The osprey from his lightning sweep
Has flutered to eternal sleep,
The huge-winged heron often too
Has graced my beautiful canoe.

There lay the widgeon in his pride,
The mottled spirit duck beside,
The ruffed grouse, yellow leg and rail.
The cackling coot with restless tail,
The snipe, dabchick and golden plover,
The woodcock, monarch of the cover,
The night heron with drooping crest,
The bittern in loose garment drest,
Each has a place in past review,
In thee my beautiful canoe.

And last, not least, the antlered deer,
Has found his final pillow here,
Down from the "mountain's crown" he came,
The proud, majestic king of game!
"Swift in his wake" old Bugle's yell
Rose on the blast with echoing swell;
Like otter through the flood he dashed,
The paddle swept, the rifle flashed,
And on the crashing bullet flew,
He's lying in my bark canoe.

I look on thee through memory's haze,
And see once more the camp fire's blaze,
My loved companions seated round
That almost consecrated ground—
I hear their merry laugh again,

Mirth's careless, joyous, wild refrain ;
The joke, the song, the hunting story,
Return in all their vivid glory—
Green spots of bliss, alas ! how few,
My beautiful old bark canoe !

I look on thee and think upon
The happy days forever gone,
I miss, how sadly, from my side
My spirit's twin, my nanhood's pride,
The ready hand, the loving heart,
The soul of my own soul a part,
The gentle voice, the smile which gave
Me courage to be true and brave—
All these were mine when thou wert new,
My beautiful old bark canoe !

WILLIAM PITTMANN LETT.

Ottawa, Nov. 19th, 1882.

AN EXPLANATION BY MR. WHITCHER.

Rideau Bank, Ottawa.

DEAR MR. COUPER,

Attention is drawn to certain passages in an article in *The Canadian Sportsman and Naturalist*, viz :—

"When Mr. Wilmot exhibited his fishes at Ottawa, the Editor of this Journal competed with a collection of stuffed food-fishes from the Province of Quebec; many of the latter species were different from those exhibited by the former gentleman. The Quebec fish collection was offered to the Fisheries Department, at a reasonable price; the offer being made through Mr. Whitcher, who knew the lot was a bargain, and by his request, they were packed and left in Ottawa, to await a reply from the Chief of the Department. Some days afterwards an answer was received that the Department had no money to purchase stuffed fishes, and the collection was brought back to Montreal, where it was immediately purchased by Dr. Sterry Hunt and presented to McGill College Museum. Mr. Wilmot endeavoured to induce Mr. Whitcher to purchase the collection, and probably they now regret not having secured it.

The latter reference to myself is entirely incorrect. Your own recollection of that occasion should have suggested the improbability of this assertion. Please recall the facts: You were a professional exhibitor of stuffed fishes of your own handiwork at the Dominion Exhibition. Mr. Wilmot was President of the Association and exhibited stuffed fishes belonging to the Government, entered in his own name. I objected, through Dr. Sterry Hunt, to these being put in competition for personal prizes or medals, much to Mr. Wilmot's displeasure; and having failed to protect your industry in this way, I promised to do whatever could be done towards securing your valuable exhibit for this Department, and asked you to delay shipment. There are, as correctly stated in this article, no funds provided for such purpose; but as Mr. Wilmot's specimens had been procured out of fish-breeding funds, and were thus placed on exhibition for prizes or medals to himself, my idea was

to acquire your's in the same way through him, and a correspondence was had accordingly. He did not consider your's worth acquiring and so reported. It was therefore inconvenient for the minister to authorize the purchase, and my proposal dropped. I understood that the injustice towards you as a professional was somewhat softened by awarding you a second prize; but the chief prizes and gold or silver medals went the way they were probably intended from their origin.

By referring to a recent number of the *Toronto Globe* you will find it stated, in course of an interview with Mr. Wilmot, that he says "no Taxidermist can be found in Canada whose work would appear in a favorable light," "or whose specimens (presumably of fish) are artistic enough" to be attractive. This accords with his opinion of your's. Unqualified depreciation will doubtless be a surprise if not an amusement to many other Taxidermal artists besides yourself, who are obliged to labor in the business without such public encouragement or private patronage, as in older countries serve to enhance the art and improve the productions of Taxidermy.

I quite agree with the *Sportsman and Naturalist* that facilities should be afforded to form a museum of aquatic animals; and I have striven during several years past to impress its importance on official minds. Time passes rapidly and with it many of the opportunities to make a choice and finished collection are also passing away. The great representative specimens (particularly of our ichthyic fauna) are fast disappearing. We find the want of such a storehouse, as should long since have been formed, in connection with the fisheries service whenever the country requires to participate in public displays. Notably at the present juncture.

The article in question adds, referring to the International Fisheries Exhibition:—"We know that Mr. Wilmot, of Newcastle, Ont., has done his share to make a successful show, but some one in the Department is to blame for procrastination and want of energy." If the reflection is meant for my benefit—as most of the editorial reflects on me personally—your information on this point also is incorrect, as I have had nothing whatever to do with the matter, beyond making a timely statement of what was required to be done in order to do justice to Canada on so important and trying an occasion, offering also some practical suggestions as far back as last winter. Mr.

Wilnot claims to be charged with the duty; and if, as he complains through you and the *Globe*, there is indifference and neglect chargeable against the Canadian Government, and dilatoriness by the Imperial Commission, it must be obvious that the proper way to settle it is with the authority under which he says that he is acting, and certainly not through vague insinuations aimed at "Some one in the Department" on whom the blame of his own anticipated failure may if necessary be conveniently shifted.

This communication has been withheld hoping that Mr. Wilnot would correct the mis-statements. Reluctantly and in self defence I now ask you to please do so on my behalf.

Before parting let me add that I fully endorse what you have said of the value to his country, of such a "live" Commissioner of Fisheries as Prof. Baird, and as heartily do I join with you in wishing that we had his like in Canada, to say nothing of his zealous staff of scientists and other practical workers, all supported by ample means and adequate authority. The United States Government thoroughly appreciates the federal fisheries service; and besides maintaining it on a liberal footing, has always treated the able and earnest officer at its head in a spirit of justice and generosity, worthy of the great national interest which he seeks to promote, and the vast productive industry which he labors to develop.

Your obedient Servant,

W. F. WHITCHER.

LIST OF THE BIRDS OF WESTERN ONTARIO.

CONTINUED FROM PAGE 187.

126. *Asio Americanus*; Long-eared Owl. Uncommon. Occasionally several may be seen hunting a field in winter like Harriers.

127. *Asio accipitrinus*; Short-eared Owl. Rare. We have only taken four.

128. *Strix nebulosa*; Barred Owl. Common; breeds. Formerly abundant.

129. *Uula cinerea*; Cinereous Owl. Two in possession of S. Herring, Toronto, shot near London. Very rare in winter.

130. *Nyctale Acadica*; Acadian Owl. Rather rare. Not known to breed.

131. *Scops asio*; Mottled Owl. Our most common Owl. Breeds.

132. *Bubo Virginianus*; Great Horned Owl. Common. Breeds very early.

133. *Nyctea Scandiacae*; Snowy Owl. Occasionally common in winter. More regular along

the lake-shore, especially Lake St. Claire.

134. *Furnia funerea*; Hawk Owl. Very rare. One bought in the flesh in London, 187—. [E. W. Sandys.]

135. *Falco peregrinus navius*; Duck Hawk. Very rare inland. One taken near London, 187—. Frequently seen in fall at St. Clair Flats.

136. *Esalon columbarius*; Pigeon Hawk. Rare; three or four taken.

137. *Tinnunculus sparverius*; Sparrow Hawk. Our most common Hawk. Breeds.

138. *Pandion haliaetus Carolinensis*; Fish Hawk. Rare inland. More common along the lake-shore where it breeds.

139. *Elanoides forficatus*; Swallow-tailed Kite. Some years ago a pair of these birds stayed all summer about eight miles North-west of London.

140. *Circus Hudsonius*; Marsh Hawk. Rare inland. Very common along the large marshes, where it breeds.

141. *Accipiter Cooperi*; Cooper's Hawk. Rather common; breeds.

142. *Accipiter fuscus*; Sharp-shinned Hawk. Common in the fall, but only a few breed. Late in September, 1882, large numbers of these hawks were seen on Point Pelee, as many as fifty passing the house in a day. It seems they are equally abundant every year.

143. *Asur atricapillus*; Goshawk. Occurs frequently in winter and regularly at the St. Clair Flats.

144. *Buteo borealis*; Red-tailed Hawk. Common; breeds.

145. *Buteo lineatus*; Red-shouldered Hawk. The most common of our large hawks; breeds.

146. *Buteo Pennsylvanicus*; Broad-winged Hawk. Sometimes common in flocks during migrations. At other times single individuals are rather rare.

147. *Archibuteo lagopus sancti-johannis*; Rough-legged Hawk; Black Hawk. Common in fall at the St. Clair Flats.

148. *Aquila chrysaetos Canadensis*; Golden Eagle. Very rare. Mr. Sandys reports two—one of which was taken in the winter of '74-5 benumbed by cold, and is still alive in captivity.

149. *Haliaeetus leucocephalus*; Bald Eagle. Rather rare. A pair breeds regularly on a lake-side farm in Kent, and several pairs on Point Pelee. Seldom seen in the older districts. The pair on the Kent farm live chiefly on fish and muskrats, taking the former from the water themselves, winter and summer.

150. *Cathartes aura*; Turkey Buzzard. Reported from various points in the St. Clair marshes.

151. *Ectopistes migratoria*; Pigeon. Formerly abundant. Now rare except in the less settled districts.

152. *Zenaidura Carolinensis*; Dove. Regularly distributed and rather common; breeds. A specimen taken January 6, 1877.

153. *Meleagris gallopavo Americana*; Wild Turkey. Formerly common, but now very rare. A nest was found in Middlesex in 1878.

154. *Canace Canadensis*; Canada Grouse. One taken near Chatham.

155. *Bonasa umbellus*; Ruffed Grouse. Common; Breeds.

156. *Cupidonia cupido*; Prairie Hen. A few are resident at St. Clair Flats.

157. *Ortyx Virginianus*; Quail. Common; breeds.

158. *Ardea herodias*; Great Blue Heron. Common. Generally breeds in communities, but occasionally in single pairs.

159. *Herodias alba egretta*; Great White Egret. Regular but rare. near large bodies of water, sometimes even on rivers.

160. *Eutroides virescens*; Green Heron. Rather rare. Occasionally quite common.

161. *Nycticorax nycticorax*; Night Heron. Occurs at the St. Clair Flats in small numbers where it probably breeds.

162. *Botaurus lentiginosus*; Bittern. Rare inland but common at the St. Clair and other marshes, where it breeds.

163. *Ardetta exilis*; Least Bittern. Occurs with the last but not quite so common, and more seldom inland.

164. *Streptopelia interpres*; Turnstone. Rare during migrations.

165. *Squatarola helvetica*; Black-bellied Plover. Common migrant.

166. *Charadrius dominicus*; Golden Plover. Formerly occurred in immense flocks. Now regular but in limited numbers in fall inland and during both migrations at the lakes.

167. *Oxyechus vociferus*; Killdeer. Rather common; breeds.

168. *Egialites semipalmatus*; Semipalmated Plover. Common at the lakes; uncommon inland.

169. *Egialites melodus*; Piping Plover. Common at Point Pelee where it breeds; elsewhere, occurring only along the lake-shore and rare.

170. *Philohela minor*; Woodcock. Rather common; breeds.

171. *Gallinago media Wilsoni*; Snipe. Common in the migrations. Many breeds in the St. Clair marshes as a pair were shot 17-5-82.

172. *Macrorhamphus griseus*; Robin Snipe. Rare along the lakes.

173. *Actodromas maculata*; Pectoral Sandpiper. Occurs in flocks in the marshes in fall.

174. *Actodromas minutilla*; Least Sandpiper. Occurs rarely inland but is common on the lake-shore.

175. *Pelidna alpina Americana*; Dunlin. Common in migrations along the lakes.

176. *Ereunetes pusillus*; Semipalmated Sandpiper. Common migrant at the lake-shore but rare inland.

177. *Calidris arenaria*; Sanderling. Common migrant along the lakes.

178. *Limosa fedra*; Marbled Godwit. Rare migrant along the lakes.

179. *Totanus melanoleucus*; Greater Yellow-legs. Rare inland but more common in the large marshes.

180. *Totanus flavipes*; Little Yellow-legs. Occurs with the preceding.

181. *Rhyacophilus solitarius*; Solitary Sandpiper. In the summer of 1879, this bird bred very commonly along the streams in Middlesex but since then has been quite rare.

182. *Bartramia longicauda*; Bartram's Sandpiper. Very rare. Only one specimen taken.

183. *Tringoides macularius*; Spotted Sandpiper. Common everywhere along streams and marshy spots.

184. *Numenius longirostris*; Long-billed Curlew. Formerly occurred as far inland as Middlesex—probably never now. Rather common migrant in the large marshes.

185. *Phalaropus fulicarius*; Red Phalarope. Very rare. Dr. Garnier shot one out of a flock of six in the fall of 1880 at Mitchell's Bay.

186. *Lopipes hyperboreus*; Northern Phalarope. Rare. Three taken in Middlesex; one found dead at Mitchell's Bay in May 1882.

187. *Steganopus Wilsoni*; Wilson's Phalarope. Very rare. One taken May, 1882, at Mitchell's Bay.

188. *Recurvirostra Americana*; Avocet. Extremely rare. One taken in the spring of 1860, at Rondeau. [E. W. Sandys.]

189. *Rallus elegans*; King Rail. Common at St. Clair Flats where it breeds. McIlwraith gives Clapper Rail but not King Rail—probably a case of mistaken identity as it is improbable that the Clapper will occur.

190. *Rallus Virginianus*; Virginia Rail. Rare inland but common at all the large marshes, where it breeds.

191. *Porzana Carolina*; Carolina Rail. Uncommon inland but breeds abundantly in the large marshes.

192. *Porzana Noveboracensis*; Little Yellow Rail. Rare in the large marshes.

193. *Gallinula galeata*; Florida Gallinule. Breeds very abundantly in the large marshes.

194. *Fulica Americana*; Coot. Almost as abundant as the last, and is also taken in the rivers inland.

195. *Grus Canadensis*; Sand-hill Crane. Extremely rare in the large marshes.

196. *Olor Americanus*; Whistling Swan. Occurs regularly at St. Clair and other suitable places.

197. *Olor buccinator*; Trumpeter Swan. In Jour. Proc. Linn. Soc., 1865, Rev. W. Hincks (Toronto) says: "*O. buccinator* is our commonest species." It must, therefore, occur with the other at St. Clair Flats, although we have no record of it.

198. *Chen hyperboreus*; Snow Goose. Very rare. Two specimens taken (E. W. Sandys).

199. *Anser albifrons Gambeli*; White-fronted Goose. Rare Migrant.

200. *Bernicla Canadensis*; Canada Goose. Common migrant.

201. *Bergia brenta*; Brant. Rather rare migrant.

202. *Anas boscas*; Mallard. Uncommon inland but common migrant in the large marshes where a few breed.

203. *Anas obscura*; Black Duck. Common migrant. A few breed in the large marshes, also taken inland.

204. *Chaulelasmus streperus*; Gray Duck. Rather rare but occurs regularly at St. Clair.

205. *Dafila acuta*; Pintail. Common. Breeds at St. Clair.

206. *Mareca Americana*; Widgeon. Rather common. May breed.

207. *Spatula clypeata*; Shoveller. Rather rare at St. Clair Flats, and may breed.

208. *Querquedula discors*; Blue-winged Teal. Common. A few still breed at St. Clair.

209. *Nellion Carolinensis*; Green-winged Teal. Common migrant. Not known to breed.

210. *Aix sponsa*; Wood Duck. Regularly distributed and rather common. Breeds along the marshes and rivers.

211. *Fulix marila*; Scaup Duck. Very common migrant. A few breed at St. Clair. Also taken common inland.

212. *Fulix affinis*; Bluebill. Like the preceding. Also taken common inland.

213. *Fulix collaris*; Ring-billed Duck. Common in some migrations in the large marshes.

214. *Aethya vallieneria*; Canvas-back. Rather rare at St. Clair Flats. Migrant.

215. *Aethya Americana*; Redhead. Very common migrant, and some breed in the large marshes. Also taken inland.

216. *Clangula glaucium Americana*; Golden-eye. Rather common migrant. Also taken inland.

217. *Clangula albeola*; Buffhead. Common migrant and a few breed at St. Clair Flats. Also taken inland quite common.

218. *Harelda glacialis*; Long-tailed Duck. Rather rare migrant at St. Clair. An immature

male was picked up in the snow January, 1881, near Hyde Park.

219. *Eidemia Americana*; Scoter. Rare migrant.

220. *Melanetta velvetina*; Velvet Scoter. Very rare migrant.

221. *Eristatura rubida*; Ruddy Duck. Abundant migrant and a few breed in the marshes. Also taken inland, common.

222. *Mergus merganser Americanus*; Goosander. Common migrant both on rivers and lakes.

223. *Mergus serrator*; Red-breasted Merganser. Rare migrant.

224. *Lophodytes cucullatus*; Hooded Merganser. Common migrant both inland and at the lakes.

225. *Pelecanus erythrorhynchus*; White Pelican. One taken near Chatham 187—; also one near Ingersol several years ago.

226. *Phalacrocorax carbo*; Cormorant. Occurs rarely along the lakes.

227. *Larus argentatus Smithsonianus*; Herring Gull. Common. Probably breeds.

228. *Larus Philadelphicus*; Bonaparte's Gull. Common in spring in fall.

229. *Sterna Forsteri*; Forster's Tern. Common; breeds at St. Clair.

230. *Sterna fluvialis*; Common Tern. Breeds at St. Clair but in smaller numbers than the last.

231. *Hydrochelidon lariformis surinamensis*; Black Tern. Breeds very abundantly at St. Clair marshes.

232. *Podiceps Holbolli*; Red-necked Grebe. Very rare; one taken at Mitchell's Bay.

233. *Dytes auritus*; Horned Grebe. Breeds abundantly at St. Clair Flats.

234. *Podilymbus podiceps*; Carolina Grebe. Breeds abundantly at St. Clair Flats.

235. *Colymbus torquatus*; Loon. Common in the large marshes and at some points in the lakes. Breeds.

236. *Colymbus septentrionalis*; Red-throated Diver. Very rare. One shot on the Thames near London in spring 1881. Occasional at St. Clair Flats.

INTELLIGENCE AND HUMOUR IN A HORSE.

A friend and neighbor of mine, recently informed me, that a few years ago, his father possessed a colt which exhibited proofs of intelligence amounting to reason, and also to a certain degree of a sense of humour. The stables on his farm are ranged in a row under the barn, and the lower doors are fastened, as usual, with a long wooden bolt. The colt learned in some way how to draw back the bolts, and so to open the stable doors and let out all the other horses which stood loose in the stalls. He then

seemed thoroughly to enjoy the mischief he had done. In order to prevent this practice, which became troublesome, holes were bored in the doors behind the bolts, and wooden pins inserted, so that the bolts could not be drawn back without first taking out these pins. For some time this device baffled the colt, but before long he found out how to evade it, and used to pull out the pin with his teeth, draw the bolt and let the door fall open as before. He would then gallop off with the pin in his mouth and drop it where it could never be found again. After having thus opened the doors and let out the horses, his master would often try to catch him, but the stables communicated with one another at the back, and the colt used to dodge the old man in at one door and out at the other, as in pure fun or mischief, until some one of the younger and more active men, came with a stick and brought him to terms. The above acts indicate no low order of reason, and certainly look as if the colt enjoyed playing the pranks and witnessing the discomfiture of his master.

E. W. CLAYPOLE,
New Bloomfield, Perry Co., Pa. }
Nov., 26th 1882. }

CANADIAN OÖLOGY.

DEAR SIR,—I am much interested in the list of Western Canadian Birds contributed by Messrs. Morden and Saunders, to the November number of your Journal. Having promised to continue my experience in Oological study during the past season, I beg to send the following notes:—The *Wood Thrush* and *Wilson's Thrush*, are quite abundant in this vicinity, but until the past summer I had but little personal knowledge of the Hermit Thrush. In June last, however, I discovered three nests of the latter species. The first, which contained four eggs, was placed in a low beech bush, nearly two feet from the ground, and was composed of dry leaves, stalks of dry weeds, bramble, rotten wood, rinds and small roots. Surrounding the nesting-place was a thick growth of low brushwood. The second nest containing four eggs, was placed in an old turned up root, about four feet from the ground, and in the midst of a grove of young tamarac. When discovered, the bird was sitting on the nest and I could have caught her had I wished to do so. The third nest, containing two eggs, was placed in a bunch of yellow water lilies, a few inches above the water of a pool. Early in April I saw a solitary specimen of the

Olive-backed Thrush, but I have not yet discovered its nest. On the 6th of June, I noticed a small species of Thrush, new to me, building her nest. The site chosen was a cavity in a low bank, overshadowed by a small hemlock, on the margin of a swamp, near water. A large quantity of dry leaves was used in raising the foundation to the required position. When I visited it a week after, the foundation of the nest was burrowed by some small animal, but I found one egg beneath it. This egg was marked exactly like that of the Golden-crowned Thrush; but it was much smaller in size. The other nest of this species, which contained five eggs, was placed in a corner of a turned up root, the top of which hung over, sheltering it from sun, rain, and observation, and beneath which was a pool of water. The female sat upon this nest until my hand was a few inches off. The colour of the bird was slaty-black on the upper parts, yellow below, with black marks extending downwards from the throat. Length five inches; common notes, a sharp "chip." Song of the male resembling the words "dure dure lidy, dure lee." I have since identified this species as the Large-Billed Water Thrush, (*Scirurus ludovicianus*). On the 8th of June, I discovered the nest of a species of warbler hitherto unknown to me. This was situated in a small balsam, (in a black ash swamp,) four feet from the ground, and formed of small stalks of weeds, rootlets and fine hair, much in form and size like the nest of the Chipping Sparrow. This nest contained four fresh eggs, white in colour, with a ring of reddish spots towards the largest end and a few dots of the same hue near the centre. I identify the latter species as the Myrtle Bird, or Yellow-Rump Warbler, (*Dendroeca coronata*). The nest and eggs are in my collection. I also collected for the first time, two nests of the Chestnut-sided Warbler. One was situated in a cluster of raspberry vines; the other, in a small scrubby beech; the first contained two of its own eggs, and two Cowbird's; the other, four, and one Cowbird's. The eggs of the Cowbird were also found in the nests of the Black Snowbird, Swamp Sparrow, Song Sparrow, Chipping Sparrow, Yellow Warbler, Golden-crowned Thrush, Red-eyed Vireo and Water Wagtail. This latter nest was the first of this species that I have seen; it was placed in the cavity of a large turned up root, over a pool of water, into which the bird jumped when she left the

nest. The nest was like that of the Snowbird, and contained four of its own eggs, besides that of the Cowbird. These were white, thickly dotted towards the large end, with reddish spots. They were, however, (June 8th,) nearly incubated; so I did not remove them. On the 7th of June, I collected in a beaver meadow, some two miles north of the town, three nests of the Purple Finch; these were situated near the tops of small balsams. Four eggs are the general set. On the same date, I took from a small thorn bush; a nest of two eggs, which I have marked as belonging to the Black and Yellow Warbler. The Yellow Warbler is quite abundant in this neighbourhood now, though it is only a few years ago since I first noticed it, and the same may be said of the Bobolink. The Catbird is numerous in this locality, I have seen several nests this season, but never, except on one occasion, saw more than four eggs in a nest. The Red-wing Blackbird is also numerous; collected several nests this season, mostly from flags in water ponds, or the margins of creeks. The Highholder or Golden-winged Woodpecker, is the most abundant of this class of birds here; I have collected some five or six sets of its eggs this year. There are generally six eggs in each set. Altogether I have collected eggs of some forty different species of wild birds this season, and obtained seven additional species by exchange, from J. A. Morden, Esq. I have now in my collection specimens of the eggs of nearly seventy Canadian birds. When in London, on the 27th of September, last, I identified among the grand collection of Canadian and foreign birds, exhibited by J. A. Morden, Esq., a specimen of Cooper's Hawk, as the species whose nest and eggs I described in my last article.

WM. L. KELLS.

Listowel, Ont., Nov. 1882.

COLEOPTERA FOUND IN THE PROVINCE OF QUEBEC.

By WILLIAM COOPER.

PHRYGANOPHILUS collaris, *Lec.*
 STENOTRACHELUS arcatus, *Say.*
 CRYMODES discicollis, *Lec.*
 PYTHO Americana, *Kirby.*
 PRIOGNATHUS monilicornis, *Baird.*
 BORUS unicolor, *Say.*
 SALPINGUS virescens, *Lec.*
 CALOPUS angustus, *Lec.*

This insect has a wide distribution, from New Mexico to the city of Quebec. Mr. Provancher says it is rare about the neighbourhood of the latter city. When I collected there, they were abundant at the upper end of St. John St., near the Finlay Asylum.

DITYLUS coeruleus, *Rand.*

NAR CERDES melanura, *Linn.*

OXASIS 1 notoxiodes, *Fabr.*

2 thoracica, "*"*

ASCLERA ruficollis, *Say.*

CEPHALON lepturides, *Newm.*

ANASPI 1 flavipennis, *Hald.*

2 rufa, *Say.*

MORDELLA 1 marginata, *Mels.*

2 linearis, "*"*

MORDELLISTENA 1 scapularis, *Say.*

2 pityoptera, *Lec.*

PELECOTOMA flavipes, *Mels.*

CORPHYRA 1 lugubris, *Say.*

2 collaris, "*"*

3 fulvipes, *Newm.*

NOTOXUS anchora, *Hentz.*

ANTHICUS 1 reiectus, *Lec.*

2 formicarius, *Laf.*

3 floralis, *Payk.*

4 corvinus, *Laf.*

DENDROIDES Canadensis, *Latr.*

PYROCHROA flabellata, *Fabr.*

SCHIZOTUS cervicollis, *Newm.*

MELOE angusticollis, *Say.*

MACROHYSIS unicolor, *Kirby.*

EPICAUTA 1 Pensylvanica, *DeGeer.*

2 vittata, *Fabr.*

POMPHOPAEA aenea, *Say.*

MYODITES 1 fasciatus, *Say.*

1 stylopides, *Newm.*

BARYNOTUS undulatus, *Uhler.*

SITONES 1 lepidus, *Gyll.*

2 scissifrons, *Say.*

PANDELETEIUS hilaris, *Herbst.*

OTIORYNCHUS 1 sulcatus, *Herbst.*

2 ligneus, *Oliv.*

CYPHOMIMUS dorsalis, *Horn.*

L'abbé Provancher described this species as MICRONYCHUS sulcatus which falls, it being preoccupied by OTIORYNCHUS sulcatus, *Fabr.* The insect is now known as C. dorsalis as above.

PHYXELIS glomeratus, *Schoen.*

LISTRONOTUS 1 appendiculatus, *Boh.*

2 latiusculus, "*"*

ITHYCERUS Novaboracensis, *Forst.*

PHYTONOTUS nigrirostris, *Fabr.*

LIXUS musculus, *Say.*

LEPYRUS colon, *Linn.*

Continued from page 188 No. 11.

THE CANADIAN SPORTSMAN AND NATURALIST! ORIENTAL FRUIT LAXATIVE.

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Birds of Western Ontario.—Messrs. Morden and Saunders have recently published a briefly annotated 'List of the Birds of Western Ontario,* based on observations "made at and near Hyde Park, London, Mitchell's Bay, Point Pelee, and Lucknow," and numbering 236 species. The list has evidently been prepared with much care and forms a valuable addition to our knowledge of the distribution of Canadian birds. Among southern species included we note the Swallow-tailed Kite, the Cardinal Grosbeak, the Blue-gray Gnatcatcher, Hooded Warbler, Mocking Bird, Rough-winged Swallow, Turkey Buzzard, Avocet, Great White Egret, Glossy Ibis, etc.; and among northern species the Bohemian Waxwing, Evening Grosbeak, etc. Comparison with Mr. McIlwraith's well-known excellent list of the birds of Hamilton, Ont., published in 1866, shows that, while it contains 5 species less than that, it includes 19 not enumerated in the Hamilton list. In this connection attention should be called to Mr. McIlwraith's recent interesting collation of the two lists,† his article forming an instructive commentary on the general subject, and at the same time a supplement to his own earlier list, he adding 7 species not contained in either of the two lists here under notice, raising the number of species thus far noted in Western Ontario to 260.—J. A. A.

* List of the Birds of Western Ontario. By J. A. Morden and W. E. Saunders. Canadian Sportsman and Naturalist, Vol. II, Nos. 11 and 12, pp. 183-187, 192-10. November and December, 1892.
† Canadian Sportsman and Naturalist, Vol. III, pp. 102-103, Jan. 1893.

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THE

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A
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VOL. III.

No. 1.

1883.

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THE CANADIAN SPORTSMAN AND NATURALIST.

No. I.

MONTREAL, JANUARY, 1883.

VOL. III.

WILLIAM COUPER, Editor.

UNPAID SUBSCRIPTIONS.

Some of our friends have not yet sent us the amount due for last year's subscription. We hope this reminder will cause a prompt remittance, as we feel confident that all our subscribers are able and willing to pay.

BACK NUMBERS.

We have several volumes of our second year, also a few of our first, which we can furnish at one dollar per volume. Subscribers who are short of any numbers would do well to communicate with us at once, and we will endeavour to supply them as far as possible.

TO OUR SUBSCRIBERS.

We have now entered upon our third volume, the first number of which will be sent to subscribers of last year, trusting all will continue their subscription.

The Journal has been progressing during the past two years, and further efforts on the part of our friends, will enable us to extend its columns.

The study of Natural History has made rapid progress during the past few years, and we have now in Canada many students whose notes and observations, if published, would become valuable additions to this branch of literature. We are promised contributions by some of our more advanced Ornithologists and Entomologists and have no doubt this volume will contain many interesting observations not hitherto recorded, and thus become a valuable reference to those interested in these studies. We have, so far no recent works upon the Natural History of our Dominion. In Ornithology we think the time has arrived when a properly compiled work would be favourably received, and we trust, ere long one of our rising Ornithologists will give us a book on the "Birds of Canada," as valuable and interesting as the volumes of American writers.

FISH AND GAME PROTECTION.

The annual meeting of the Fish and Game Protection Society of the Province of Quebec was held in Montreal on the 20th instant. The twenty-fourth annual report submitted was an unusually satisfactory one, a large addition having been made to the membership during the past year. The following gentlemen have been appointed officers for the ensuing year. President—Mr. E. C. Monk; Vice-President—Mr. L. A. Boyer; Treasurer—Mr. Thos. Hiam; Secretary—Mr. G. H. Matthews; Committee—Messrs. F. J. Brady, R. H. Kilby, H. R. Ives, J. H. Stearns, S. Cross, W. S. Maciariane, F. Henshaw, Alderic Deschamps, E. B. Goodacre, J. C. Nelson, John Nelson, W. Parker, Gustave Drolet, H. Rintoul, and Geo. McKinnon.

MIGRATION OF OWLS.

A female of Richardson's Owl (*Nyctale Richardsoni*) was captured at St. Laurent, near Montreal, on the 4th instant. It died after a weeks confinement in a cage. On dissection, the ovarium was found to be in an advanced condition, and the eggs of a size sufficient to show that there is no doubt of its nesting in the mountains north of Montreal. No one has yet positively discovered the nest of this interesting little owl in Canada, but from what we noticed, this specimen supplies conclusive evidence that it would not go far north of the city to construct its nest. Owls, as a rule, build early in the year, the young of some species being found fully fledged in April and May. The Snow Owl appeared abundantly in the low lands of this Province in December last, remaining but a short time after the first heavy fall of snow, and the Barred Owl, almost as common, visited the neighbourhood of Montreal, probably after the Domestic Sparrows. The little Saw-whet Owl was not uncommon throughout the country during the month of January. The above species are more or less diurnal or crepuscular in their habits, and are therefore more easily discovered. Two other species of this class the Great Cinereous and Hawk Owl, formerly occurring here during December and January seem to have so far absented themselves this

fall. The Horned Owls being more of woodland birds, are not so easily seen or procured when the snow is deep, but it is evident that all the species of STRIGIDÆ are abundant this winter. It would be well to investigate why these day owls appear in the neighbourhood of civilization during the months of December and January just for a short season, and then disappearing until the next cold fall sets in again.—C.

Correspondence.

SIR,—At the present time, when so much excitement prevails at home and abroad, regarding the prospective wealth of our country, and when so much capital and energy are being expended in developing its resources, it is pleasant to notice that those branches of its Natural History which are not directly associated with the acquisition of wealth, are not being forgotten, and that while hundreds are striving to gain possession of the most productive lands, the richest mineral deposits or the most valuable timber limits, a quieter class of workers are equally busily engaged collecting, and identifying such specimens of Natural History as come within the range of their observation throughout the country; the results of their researches are being placed on record, and when the excitement attendant on the first settlement of the new country now being opened up, has subsided, it will be a pleasant pastime for the rising generation to read therein the names and habits of the beautiful birds and flowers which surround their homes. I have been led to make these remarks on reading in recent numbers of your magazine, a list of birds of Western Ontario, by J. E. Morden and W. E. Saunders, of London; a list which I am sure will be valued by many a lover of birds throughout the country. It is very complete, yet it is by no means a compilation of the labours of others as such lists frequently are; on the contrary it bears (with very few exceptions) the impress of direct personal contact with the objects described. Great diligence and perseverance must have been bestowed on the subject to enable the collectors to bring it before the public in so complete a shape; yet I can also imagine their having much real enjoyment and many a pleasant ramble which only the enthusiastic student of nature can understand. In 1866, I published a similar list of birds observed near Hamilton, and on

placing the two side by side, it is astonishing to notice how closely they agree; the differences arising chiefly from stragglers which may have appeared at one point and not at the other. The following are the principal points of difference which if taken along with the recent list, may help to complete our knowledge of the subject. In the Hamilton list the total number of specimens enumerated was 241; in the London list the total number is 236. In the *London* list the following sixteen species are included which do not appear in the *Hamilton* list.—Swallow-tailed Kite; Cardinal Grosbeak; Red Phalarope; Little Yellow Rail; Scoter Duck; Tennessee Warbler; Hooded Fly-catching Warbler; English Sparrow; Mocking Bird; Common Tern; Wilson's Phalarope; Forster's Tern; Blue-grey Gnat-catcher; Long-billed Marsh Wren; Rough-winged Swallow; Banded three-toed Woodpecker. The Swallow-tailed Kite is a southern species, but a wanderer of powerful wing, who may occur again as a visitor. The Cardinal and Mocking birds are from the south, but come so close to the frontier that these may be only the pioneers of larger numbers yet to come. The little Yellow Rail; the two Terns, and the Long-billed marsh Wren, seem to prefer the greater retirement and shallower warmer water of the St. Clair Flats to the cooler inlets of Burlington Bay where I have not yet observed them. The Scoter, Tennessee Warbler, Hooded Warbler and Blue-grey Gnat-catcher, I have met with since writing my list. The Rough-winged Swallow had probably not appeared in Canada in 1866, as I find it was not met with in New England till 1875, when only one specimen was found; since that time it occurs breeding in little communities throughout the Eastern States. For the same reason, the English Sparrow was not named, as he was not introduced here till about 1873; since that time, he has passed through the different stages of rare, common, exceedingly abundant; what his next stage will be, may be affected to some extent by the members of the Fruit-growers Association, as I notice it as a matter announced for their consideration during the coming year. Wilson's Phalarope is a bird of the Prairie ponds which may again be found in suitable localities. The Red Phalarope and the Woodpecker are uncertain visitors from the north. Referring to the Ruby-crowned Wren, the London list says "they arrive from the north in October, and in mild winters remain." I was aware that

the *Gold-crest* wintered with us, but have not hitherto heard of the *Ruby-crown* doing so; if this is found to be strictly correct, it would indicate a milder climate than we have. The Northern Shrike it also says "remains in mild winters but very few breed; if even a few breed, it is well to be assured of it; but the two shrikes get so often mixed up that I think it would be well to revise this item, as to their staying with us in mild winter; they are most common here in severe weather; and at present may be seen any day scalping poor *Passer domesticus* in the public thoroughfares. The Mourning Warbler, Red-bellied Woodpecker and Yellow-billed Cuckoo still continue rare here as in 1866, the latter two I have not seen again since that time, on the contrary the Orchard Oriole was observed here at different points last summer and several pairs were known to breed near the city though, till then I had not heard of it since the notice made on my list. Early on a May morning of 1882, a male in full plumage appeared to my great delight in my orchard; I watched him sailing with outspread wing and tail, from one fruit tree to another till I got familiar with his notes and manner—then; no—I did not shoot him; it was Sunday and I deferred that operation till the morrow, but on the morrow he was gone and I saw him no more. In the Hamilton list the following twenty-two species are included which do not appear in the London list. Baird's Buzzard; Richardson's Owl; White-fronted Owl; Yellow-bellied Fly-catcher; Green black-capped Fly-catcher; Hudsonian Curlew; Surf Duck; Pomarine Skua; Robin Snipe (*Tringa canutus*); Eider Duck; Buteo elegans; Caspian Tern; Wilson's Tern; Black Guillemot; Foolish Guillemot; Great black-backed Gull; Rosy Gull; Solan Goose; Black Hawk; Canada Jay; Glossy Ibis; Hudsonian Godwit. As the result of investigation made since 1866, it is now believed that Baird's Buzzard is a different form of Swainson's Buzzard. The White-fronted Owl, the young of the Saw-whet Owl, the Black Hawk, a condition of the Rough-legged Buzzard, and Buteo elegans of the Red-shouldered Hawk. All the others are good species, some of which I have met with again and some I have not. The two little Fly-catchers will assuredly be met with by the London collectors, if they continue their researches as though rare, they are regular visitors. I have now to mention the occurrence in Canada of a few species which do not

appear in either of the lists. *Helminthophaga celata*, Orange-crowned Swamp Warbler—When visiting at the shop of a Taxidermist in Toronto a few years since, a boy brought in a capfull of warblers he had collected for the artist, and I picked out a specimen of *celata* from among the lot; it was a male, but so badly shot that the specimen was lost and I have not met with it since. *Aegiothius Xelipes*—Mealy Red-poll. I find this bird described in some works as a distinct species and in others as a northern variety of the common Red-poll. Whatever his true position may be in science, he differs in appearance as much from the common Red-poll as the Northern Shrike does from the *excubitoroides*. The general appearance of the bird is hoary-grey and so densely covered with feathers that the bill and feet are scarcely visible. *Tryngites rufescens*—Buff-breasted Sandpiper. A few years since, in a moist grassy hollow on the beach, I met with six of these delicate little birds and so gentle were they and unsuspicious that I obtained them all. In August of the following year I saw a few again at the same place, but a railroad now passes over that spot, and as I never saw them elsewhere, I may not see them again. *Numenius Borealis*—Esquimaux Curlew. I captured a specimen of this little sickle-bill, near the same resort as the preceding. He was alone, evidently a straggler from a passing flock. *Tringa Bonapartei*—Bonaparte's Sandpiper. This plain looking species I think is quite common with us, though from its general resemblance to several other kinds, is easily overlooked. *Larus Tridactylus*—Kitty-wake Gull.—This species is quite common round the bay for a few weeks every fall. *Strix flammea*—Barn Owl.—The occurrence of this species deserves something more than a passing notice, as so far as I am aware, this is the only instance of its being found in Canada. It is resident in the United States from the Atlantic to the Pacific, as far North as the latitude of North Carolina, keeping mostly along the sea coasts, becoming rare in the interior. In Scotland where the species is common, it is mostly found to frequent retired country church towers or hide away among the ivy which covers some ancient ruin. Superstition still lingers among the people in the rural districts and the owl is looked on as a bird of evil omen whose visit to a farm house is always received as a "warning" that some calamity is about to befall the family. Its cry is by no

means refreshing and many a sturdy Scot who could fix his bayonet and with nerves of steel, march to meet an unreasonable number of his country's toes, has quailed at the cry of the "Hoolet" when unexpectedly heard in some lonely glen. In his nocturnal excursions he is a frequent visitor to the church and graveyard and has even been seen to alight on the tombstones; perhaps the abundance of mice among the rank grass of the burying ground and the protection which the sacredness of church property affords may to some extent account for this habit; but strange to say our visitor here shewed the same predilection, as the first notice I heard of him was from one of those boys who are always alive to such things, who told me that "a fellow out near the Cemetery had killed a new kind of an owl, white and yellow with a very sharp nose." On interviewing the captor, he said he would never have known he was there, had it not been for a lot of crows who gave him away by the awful row they were keeping up round a clump of pines; taking his gun, he jumped the fence, and saw the owl in the thick of the evergreens, with the crows assailing him on every side. A charge of No. 5 killed the owl and the meeting broke up. It was a young male in fine plumage, caught perhaps in the strong south wind which prevailed for a few days during the first week in May, 1882, and carried much farther north perhaps than he intended. To get at the total number of species thus far observed in Western Ontario, it will be necessary to take from the 241 described in 1866, the four already referred to as not being good species, leaving 237 to which add 16 in the London list not included in the Hamilton one, and also 7 which do not appear in either list making in all 260 species which I think will satisfy your ornithological readers that the birds of Western Ontario have been pretty well identified. There are still a few more which I think will yet work their way round the west end of Lake Erie and, like the Orchard Oriole, make their homes among us. Of this class I would name the Summer-red bird; Tufted Titmouse; Great Carolina Wren; Black-throated Bunting; Blue Grosbeak; Prairie Warbler; Worm-eating Warbler; all these already come so near our border that a favorable wind during the spring migration may any season land them among us. When such takes place I hope you will hear of it and let us all know.

Yours very truly, T. McILWRAITH.
Cairnbrae, Hamilton, January 20, 1883.

ORNITHOLOGICAL NOTES.

"PROLIFIC" SWALLOWS.

The White-bellied Swallow, *Iridoprocne bicolor* (Vieillot) Coues: usually lay five or six eggs. Last year I experimented with a nest of these birds, which resulted in thirteen eggs being laid, as follows. April 16, entering cigar box that I had cut a small hole in, and nailed to the veranda outside my bed-room window. May 9, building nest. May 29, two eggs laid. Took one out each day from the latter date, to 5 June, being seven eggs taken out, and one left in the nest. June 17, nest contained six eggs, which I did not take. 25 June, feeding young. 14 July, young fledged.

"UNIQUE" CATBIRDS EGGS.

On the 8th July, 1872, I found a Catbird's (*Mimus Carolinensis* (Linnaeus)) nest in a thin bush about four feet high, containing two eggs of the ordinary size, and colour: but, both are covered all over with distinct, small, dark spots. I have examined a large number of Catbird's eggs, and never before, saw, or heard of any with marks on them.

CROW BLACKBIRDS.

I think we have two species of Crow Blackbirds in Canada, viz. — *Quiscalus major* (Vieillot,) Boat-tailed Crow Blackbird; Jackdaw and *Q. purpureus* (Lichtenstein,) Purple Crow Blackbird; Purple Grackle. I have only observed the former in company with the latter. The only apparent difference between them being a peculiar spreading of the tail feathers when on the wing, resembling the form of a boat. Can any readers of the C.S. & N. inform me if there is any difference between the nests and eggs of the two species?

ERNEST D. WINTLE,
Montreal.

CAT BIRDS EATING BEES.

In the summer of 1879, my attention was drawn to the frequent visits of a pair of Catbirds to my apiary, and a close observation of their movements left no doubt as to their object. A bee was taken at each visit and carried to a neighbouring copse; where, after a short search I discovered their nest with young. Pity for the young birds at first prevented me from destroying the parents, but a desire to further investigate the extent of their depredations prevailed, and I shot both birds. Upon examination I found that the

young were being fed entirely upon bees, but I could only discover the bodies of drones or males; whether the instinct of these birds prompted them to select the drones in preference to the workers on account of their superior size and slower movements, or from a fear of the stings of the latter, I could not determine. Numbers of Cat-birds have for years past nested in the vicinity of my apiary, but I do not know of any other instance of these birds feeding upon bees.

W. W. DUNLOP.

Montreal, January 27th, 1883.

SPARROW NOTES.

The well known fact, that the animal and vegetable productions of the old world, when transplanted to America, thrive and multiply, has been further attested by the spread of the common sparrow of Europe, (*Fasser domesticus*) over a large part of this continent during the few years which have elapsed since its introduction. Extending on every side from the various cities into which it has been brought, it has spread over the country adjacent, and in time, will, no doubt, be everywhere abundant as far as its Southern limit. How far this will extend is an interesting question. Its range in the Old world is extensive from east to west,—from the Atlantic Ocean to Siberia. From north to south it is found all over Europe, but becomes rare in Italy south of Piedmont, and only occasionally is seen in the north of Africa. In Asia it extends southwards to the northern parts of India. It has been introduced into the Southern States of America, but, according to a statement in a recent American publication, it will not live in the hottest portions of the south, the excessive heat being fatal to it. How the species can exist in Canada during the excessive cold of winter, is certainly remarkable. And yet this hardy bird not only lives, but contrives to find abundance of food. An exceptionally cold season, however, no doubt destroys a good many individuals. I have seen the bodies of sparrows, picked up dead in the street in very cold weather, which were plump and well fed, and without any injury, so that the cause of death was probably nothing but the intense cold. In such weather they seek shelter as much as possible, and but few are seen on the wing. During several past summers, I have noticed sparrows with plumage different from the general colours of the species. Many of their wing and tail

feathers were white; in some more than others, so that some individuals appeared to be altogether greyish white. I am not aware whether the bird in Europe is subject to albinism. If not, perhaps the different climatic conditions it is exposed to in Canada are a cause of the variation in colour. The question as to the usefulness or otherwise of the sparrow in Canada is still a vexed one. At present, gardeners and farmers may be benefited by them to some extent, as they are not so numerous as to be destructive. I think, too, that between the winters' cold and the attacks of their feathered enemies, their multiplication to an injurious extent will be prevented for many years. They have, however, been introduced and acclimated, and the mischief, if it is a mischief, is now done. We trust the threatened war of extermination will not need be waged against them for a long time to come.

H. K. C.

THE WOOD-THRUSHES (*HYLOCICHLA*) OF NEW BRUNSWICK.

By M. CHAMBERLAIN, St. JOHN, N.B.

This Province can lay claim to but three members of this sub-genus of the *Turdidae*, the Tawny, also called "Wilson's Thrush," and "Veery," the Olive-backed and the Hermit, for the Wood Thrush does not come so far north on the Atlantic seaboard, rarely occurring beyond Massachusetts and never reaching the northern limit of the Alleghanian faunal area, while its grey-cheeked congener, though probably passing through the country *en-route* to its breeding ground in the far North, has not as yet been taken within our boundaries. The Hermit and the Olive-backed are abundant throughout the Province and the Tawny is much too common to be called rare. They usually reach the vicinity of St. John during the first half of May, the Hermit arriving first, followed within a few days by the Tawny and in some two weeks by the Olive-backed. They leave here about the middle of September. These species have a general appearance when in the field so similar that none but experts can distinguish them, though, upon a close examination, the characteristics of each are found to be marked with sufficient distinctness to leave no doubt of their identification. In the field all three have the same outline from beak to tail, the same russet coloring above the same dull white breasts, more or less

spotted; but lay examples of each side by side and it will prove that the Tawny was correctly named, for his russet plumes have a reddish tint in marked contrast with the greenish shade of the Olive-backed, while the Hermit is distinguished by his tawny tail which changes to olive above the rump. But the actions of these birds are more nearly identical than either form or color, for whether seen hopping along the ground or perched upon a tree, feeding or flying, it is impossible to detect any difference in them.

Much has been written about these same manners that is not warranted by what is observed of them during their visit to this country. While here they appear neither timid nor shy, and I doubt if they ever yield to such plebeian weaknesses. These birds are patricians, the premier genus of the arian aristocracy on Mr. Ridgway's roll, and true to the instincts and traditions of "the first families" are modest and retiring, and prefer the calm repose of the forest to the glare and bustle of the field and roadside. They are courageous and composed under excitement, but never quarrelsome, and are happy without being noisy. In short, they display the good breeding and refined manners of the thorough-breds that they are. They cannot be called gregarious but they are not solitary—Hermit Thrush is a positive misnomer. They do not commingle as socially as do the species of some other families; indeed, they never appear as companions, yet it is not unusual to find a number of the same species frequenting one grove. I have seen as many as thirty Hermits within an area of a hundred yards square. In nidification our three species exhibit a marked difference; the nests are differently constructed and placed in different situations. Their eggs also differ in shape, size and color, and their songs differ—differ in tone, compass, volume, theme and duration.

The Tawny and the Hermit always build on the ground in this country, and though their nests and its location are quite similar yet they are not identical; both nests are loosely and roughly put together, but Veery's is the most compact and the neatest. They are usually placed in an indenture, either natural or formed by the birds, and screened by an overhanging branch, but while the Veery prefers a dry knoll in a damp spot, within a wood, the Hermit usually selects the margin of a grove or a patch of trees in a dry and partially overgrown open; neither build in a

dense thicket of trees or shrubbery. Under the nest is placed a cushion or platform composed of dried grass or moss. The nest proper is built of dried grass and small twigs, un-mixed with mud, and is lined with fine grass; sometimes fine fibrous roots and vines are added to the lining.

The Olive-backed builds in a tree, and, like all tree-builders, makes a substantial structure. It is usually placed in the crotch of a limb some six or eight feet from the ground, generally in a moist place, and occasionally in a really wet swamp. In a specimen of this nest before me coarse grass is the predominating material in the external parts, but in the walls twigs of spruce, bits of lichens and dried leaves are mixed with the grass and all are woven into a solid mass, very firm and strong. The lining is formed by a layer of fine grass interwoven with pieces of a black, vine-like root, all neatly laid; over these, at the bottom, is a layer of skeleton leaves. The measurements are: Depth, inside, $1\frac{1}{4}$ inches; width at mouth, $2\frac{1}{4}$ inches; outside the diameter is irregular, varying from $4\frac{1}{2}$ to 5 inches. Mr. J. W. Banks tells me that of some fifty nests of the Olive-backed Thrush that he has examined all were lined with skeleton leaves; but Mr. Harold Gilbert found one in 1878 that was lined with moose hair. This nest was built in a garden, in the suburbs of St. John, within twenty feet of the house and but an arms-length from one of the main walks. The moose hair was furnished by a tame animal kept on the grounds. The three species usually lay four eggs, but it is Mr. Banks' opinion that in extremely wet or cold seasons three more frequently complete the clutch. So eminent and excellent an authority as Dr. Coues gives four and five as the number of eggs, but we have never seen more than four in any nest obtained in this country.

The Tawny and the Hermit lay immaculate eggs of a greenish-blue color, but the eggs of the Hermit are much the paler and are also the longer and more pear-shaped. The eggs of the Olive-backed are of a bright greenish-blue ground color, not so dark as the Veery's and irregularly marked with purplish-brown spots. In some examples these spots are so large and numerous they almost entirely hide the ground color. The average measurements of the eggs are: Tawny, $.86 \times .67$; Olive-backed, $.92 \times .69$; Hermit, $.89 \times .64$. Few of our country-people are acquainted with the appearance of these birds but are familiar with

their songs which they attribute to one species called by them the "Swamp Robin;" for as in their appearance so in their song, there is to some degree a superficial resemblance; all have peculiar metallic voices and sing somewhat similar melodies. Their songs resemble each other much more than they resemble that of any other species. The Tawny ranks first in classification but the Hermit takes precedence as a vocalist. His song is the grandest; it is the finest musical composition and displays the most artistic execution, as well as the greatest compass and power of voice.

One is surprised to find so little about the songs of these Thrushes in the writings of the older ornithologists. Wilson says the Tawny has "no song" and calls the Hermit "a silent bird." Audubon never heard the song of the Hermit, and Nuttall does it but scanty justice. To my ear it is by far the finest song we hear in these Northern woods, and fully deserves the seemingly exaggerated title of "glorious," given it by some modern writers. The Winter Wren is his nearest rival and he startles the listener into admiration by the perfect torrent of sweet harmonies, of brilliant passages and marvellously executed trills, he hurls upon the stillness of the forest solitude in which he delights to roam; but, beautiful and joyous as his song is, in comparison with the song of the Hermit Thrush it sounds mechanical, and more like an air from a music box. The music of the Hermit never startles you; it is in such perfect harmony with the surroundings it is often passed by unnoticed, but it steals upon the sense of an appreciative listener like the quiet beauty of the sunset. Very few persons have heard him at his best. To accomplish this you must steal up close to his forest sanctuary when the day is done, and listen to the vesper hymn that flows so gently out upon the hushed air of the gathering twilight. You must be very close to the singer or you will lose the sweetest and most tender and pathetic passages, so low are they rendered—in the merest whispers. I cannot, however agree with Mr. Burroughs that he is more of an evening than a morning songster, for I have often observed that the birds in any given locality will sing more frequently and for a longer period in the morning than in the evening. I prefer to hear him in the evening, for there is a difference; the song in the morning is more sprightly—a musician would say "has greater brilliancy

of expression"—and lacks the extreme tenderness of the evening song, yet both have much the same notes and the same "hymn-like serenity." The birds frequently render their matinal hymns in concert and the dwellers in a grove will burst out together in one full chorus, forming a grander *Te Deum*—more thrilling—than is voiced by surpliced choir within cathedral walls. On one occasion an Indian hunter after listening to one of these choruses for a time said to me, "That makes me feel queer." It was no slight influence moved this red-skinned stoic of the forest to such a speech. The song of the Olive-backed ranks second in composition but he has the sweetest and most mellow voice of the three. The Veery displays the least musical ability yet his simple strain is exceedingly pleasant to the ear and his beautiful voice exhibits most strongly that peculiar resonant metallic tone which is characteristic of the genus.

I have not attempted to represent these songs by words or notes, for all such experiments as I have seen, appear to me to be failures. Neither the words of Dr. Brewer or Mr. Samuels, nor the syllables used by Mr. Ridgway or Mr. Gentry convey to my mind the idea of the songs of the birds that is impressed on my memory; and after a patient rehearsal of the notes of Mr. Horsford's score on piano, violin and flute, I fail to recognize the melodies he has attempted to write. Perhaps Mr. Horsford will say that, as I do not live in "a white pine country," I can know nothing about these Thrushes, and I certainly do not if his article in *Forest and Stream* is to be taken as evidence of what is correct. Besides their songs the three species have call notes and two or three minor notes, used chiefly when a mated pair are together. The alarm note of the Olive-backed, which Mr. Minot thinks sounds like "whit," and which he calls "the ordinary note" of the bird, is seldom used except the bird has a nest near the intruder. I think the sound would be better represented by "kwut" very abruptly and quickly uttered, with a peculiar emphatic intonation. But the songs and notes of all birds must be heard to be understood and appreciated.

COLEOPTERA FOUND IN THE
PROVINCE OF QUEBEC.

By WILLIAM COUPER.

- HYLOBIUS 1 pinicola, *Couper*.
2 pales, *Herbst*.
3 picivorus, *Germ*.
PISSODES 1 strobi, *Peck*.
2 nemorensis, *Germ*.
ERIRHINUS 1 rufus, *Say*.
2 ephippiatus, *Say*.
CENTRINUS 1 scutellumalbum, *Say*.
2 rectirostris, *Lec*.
SCYTHROPUS elegans, *Couper*.
GRYPIDIUS vittatus, "
DORYTOMUS 1 mucidus, *Say*.
2 brevicollis, *Lec*.
3 laticollis, "
ATTELABUS 1 rhois, *Boh*.
2 maculatus, *Prov*.
3 bipustulatus, *Fabr*.
OTIDOCEPHALUS Americanus, *Herbst*.
MAGDALINUS 1 baritus, *Say*.
2 algra, *Herbst*.
3 pandura, *Say*.
4 arnicollis, "
BALANIUS 1 nasicus, "
2 rectus
ANTHONOMUS 1 quadrigibbus, "
2 tessellatus, *Walsh*.
ORCHESTES pallicornis, *Say*.
PIAZORHINUS scutellaris, "
LAEMOSACCUS plagiatus, "
CRYPTORYNCHUS 1 parochus, *Say*.
2 bisignatus, "
CONOTRACHELUS 1 crataegi, *Walsh*.
2 posticatus, *Say*.
3 nenuphar, *Herbst*.
PIAZURUS subfasciatus, *Lec*. HOMOGASTER
Quebecensis, *Prov*. falls.
MONONYCHUS vulpeculus, *Fabr*.
CENTORYNCHUS 1 septentrionalis, *Gyll*,
2 sulcipennis, *Lec*.
MEGACETES inaequalis, *Say*.
RHINOCERUS pyrrhopus, *Boh*.
BARIS confinis, *Lec*.
CALANDRA 1 granarius, *Clair*.
2 orizae, *Linn*.
3 remotepunctata, *Gyll*.
SPHENOPHORUS 1 pertinax, *Oliv*.
2 zeoe, *Walsh*.
3 13-punctatus, *Ill*.
4 ochreus, *Lec*.
COSSONUS corticola, *Say*.
GONOTROPIS gibbosus, *Lec*.
EURYMICTER fasciatus, *Oliv*.
ARBHENODES septentrionalis, *Herbst*.

- CRATOPARIS lunatus, *Fabr*.
BRUCHUS pisi, *Linn*.
CRYPTURGUS atomus, *Lec*.
CHRYPPHALUS materiarius, *Fitch*.
TRYPODENDON bivittatus, *Kirby*.
XYLEBORUS 1 pyri, *Harris*.
2 coelatus, *Trimm*.
DRYOCETES septentrionis, *Mann*.
TOMICUS 1 calligraphus, *Germ*.
2 pini, *Say*.
POLYGRAPHUS rufipennis, *Kirby*.
HYLESINUS aculeatus, *Say*.
DENDROCTONUS 1 terebrans, *Lac*.
2 obeseus, *Mann*.
3 rufipennis, *Kirby*.
HYLASTES 1 cavernosus, *Trimm*.
2 pinifex, *Fitch*,
3 porculus, *Er*.
PARANDRA brunnea, *Fabr*.
ORTHOSOMA brunneum, *Forst*.
TRAGOSOMA Harrisii, *Lec*.
CRIOCEPHALUS 1 agrestis, *Kirby*.
2 obsoletus, *Rand*.
GONOCALLUS collaris, *Lec*.
BATYLE suturalis, *Say*.
TETROPIUM cinnamopterum, *Kirby*.
DULARIUS brevilineus, *Say*.
RHOPALOPUS sanguinicollis, *Horn*.
HYLOTRUPES 1 bajulus, *Linn*.
2 ligneus, *Fabr*.
PHYMATODES dimidiatus, *Kirby*.
MERION proteus, *Kirby*.
ASEMUM moestum, *Hald*.
SPONDYLUS upitormis, *Mann*.
CALLIDIUM 1 violaceum, *Muls*.
2 janthinum, *Lec*.
CHION garganicum, *Fabr*.
ELAPHIDION 1 incertum, *Newm*.
2 unicolor, *Rand*.
MOLORCHUS bimaculatus, *Say*.
CYLLENE pictus, *Drury*.
GLYCOBIUS speciosus, *Say*.
CALLOIDES nobilis, *Say*.
ARHOPALUS fulminans, *Fabr*.
CLYTUS 1 marginicollis, *Say*.
2 hamatus, *Say*.
3 longipes, *Kirby*.
PNEOCERUS supernotatus, *Lec*.
XYLOTRICHUS 1 colonus, *Fabr*.
2 sagittatus, *Germ*.
3 quadrimaculatus, *Hald*.
4 undulatus, *Say*.
5 armosus, *Say*.
NEOCLYTUS 1 muricatus, *Kirby*.
2 erythrocephalus, *Fabr*.

(Continued from page 196.)

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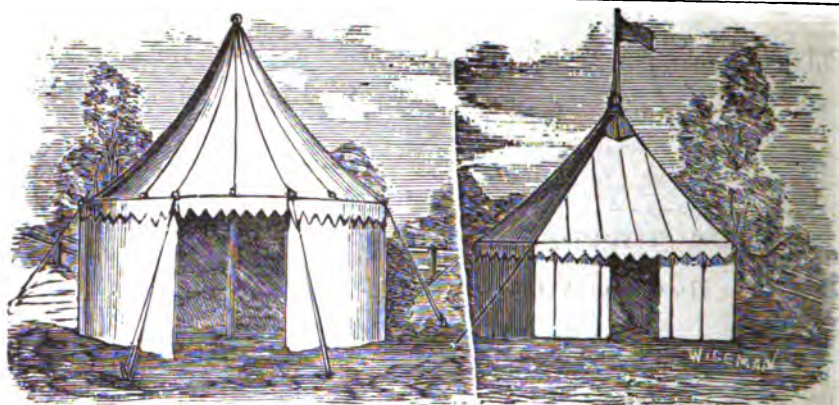
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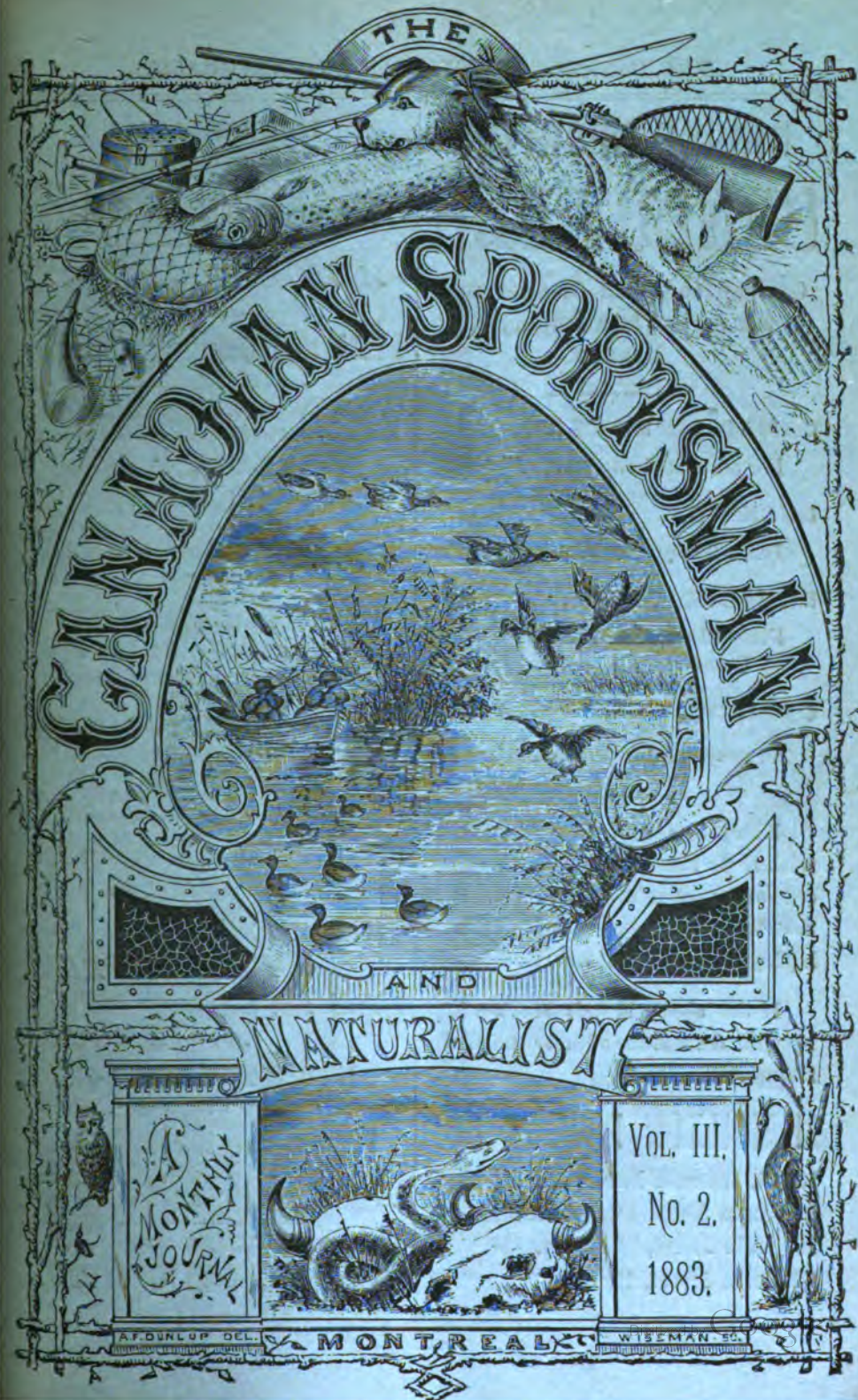
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No. 2.

MONTREAL, FEBRUARY, 1883.

VOL. III.

WILLIAM COUPER, Editor.

Subscribers, please notice that the pages of "The Canadian Sportsman and Naturalist" are to be consecutive until the end of the third volume, when we will supply an index.

PROPOSED CONVENTION OF CANADIAN SPORTSMEN.

In Vol. II., No. 9, of this journal, in concluding our remarks on the Forestry Congress we stated that the next good move should be a Congress of American and Canadian sportsmen to provide correct means for the protection of Fish and Game of both countries. There are several interesting subjects which may be discussed at meetings of true sportsmen—such as the effect of forest fires causing the decrease of animals; fish and game protection in an American and Canadian view; harmonizing the game laws of the Provinces; correct nomenclature of the game animals and other kindred subjects. American sportsmen have a greater interest according to numbers and position in taking part in a Congress of this nature than we have; besides, there is something congenial in a meeting of true sportsmen; all have the same objects in view. We at least protect the bulk of woodcock and snipe bred in the north, more for the benefit of our neighboring sportsmen than our own. We do the same with geese and ducks, classed as game occurring on the waters of both countries.

At the suggestion of several of the leading sportsmen of each Province, a Committee consisting of Mr. F. J. Boswell, Major H. R. Smith and Mr. W. A. Allan has been formed for the purpose of holding, if possible, a representative convention of the sportsmen of the Dominion to consider the present anomalous condition of the game laws, and, if thought advisable, to take immediate action with a view of doing away with market shooting by foreigners, and the export of game, and for the discussion of other matters of interest to lovers of sport. At a meeting of the Central Committee (held at Ottawa) it was resolved:

"That the Secretary be instructed to issue a circular requesting some leading sportsman to

call a meeting of the sportsmen in each county in the Dominion for the purpose of electing a delegate to attend a general convention, to be held in the city of Ottawa, on Easter Monday, the 26th of March."

The objects of the above named sportsmen are exactly what our remarks referred to in the issue of the "C. S. and N." last September, but we fear that the time stated for calling a convention of the sportsmen of the Dominion is too limited, even to secure a thoroughly representative meeting from the counties in the Provinces of Ontario and Quebec; but even should these two Provinces be well represented, a good beginning will be made, offering some encouragement in the first attempt to bring the lovers of the rod and gun together to discuss these matters.

We are in favour of American sportsmen taking part in this convention, nationality having nothing to do with sporting matters, as far as we can see. There is quite a difference between a man shooting for the purpose of supplying a foreign market and a gentleman visiting Canada for legitimate sport and recreation. These and many other points will no doubt be discussed at the convention, the result of the labors of which will be looked forward to with interest by all sportsmen.

MONTREAL MICROSCOPICAL SOCIETY.

The monthly meeting of this society was held at the Natural History Society's Rooms, on Monday evening, 12th instant, Mr. Wm. Muir in the chair.

There was a good attendance, and a number of microscopes were on the table. Mr. G. J. Bowles was elected a member of the society.

The subject for the evening, "Insect weapons," was opened by a paper from Mr. Edward Murphy, who dealt more particularly with the proboscis of the mosquito. Mr. Murphy illustrated his remarks with drawings on the blackboard, showing the parts as seen by him under the microscope. He was followed by Mr. Wm. Muir, on the same subject, after which a discussion arose as to whether this insect had poisonous glands or not. Dr. Geo. Wilkins, in the absence of Dr. Osler, exhibited an apparatus for counting the corpuscles in blood, and gave an illustration under the microscope with blood drawn from a member present.

MONTREAL BRANCH, ENTOMOLOGICAL SOCIETY OF CANADA.

The ninety-fourth meeting of the society was held at the residence of the President, Mr. H. H. Lyman, on Tuesday evening, 13th instant.

The President read an interesting and valuable paper on the genus *Callimorpha*, illustrating his remarks by a large collection of the species, and by drawings of the types in the British Museum, made by Mr. Butler, of that institution. We venture to say that the confusion heretofore existing with regard to this variable genus is likely to be got rid of through Mr. Lyman's careful and thorough work, with the assistance of Mr. Caulfield. Mr. G. J. Bowles read a "Preliminary List of the Geometridæ of the Province of Quebec," opening up interesting questions as to the limits of the northern and temperate insect faunas of Canada. A third paper was read, entitled "Notes on some diurnal Lepidoptera occurring in Canada," by Mr. Caulfield, giving Canada as the habitat of a number of species of butterflies not stated in W. H. Edward's catalogue as being found in this country.

THE TOMMY COD.

In "L'Opinion Publique" of the 18th January last, is an article on the Tommy Cod, *Morhua pruinosa*, Mitchell, by the eminent French-Canadian *litterateur*, M. Benjamin Sulte. He gives an interesting account of the fishery carried on annually in the vicinity of Three Rivers, and supplies data which disprove the common idea that it is the young of the cod. But little is known of the history of this little fish, although it has been an important article of food in Lower Canada "from time immemorial," so that new information with regard to it is interesting, both to the naturalist and the public.

Mr. Sulte states that the Tommy cod ranges from Newfoundland to Three Rivers, but it is much more widely distributed, being found on the coast of New York, and no doubt on that of New England, if not farther east. DeKay tells us that it ascends the Hudson as far as Albany, where it is abundant at intervals of a few years. On the Long Island coast it is sometimes so plentiful that it can be shovelled on to the shore from the shallow water. It goes up the Hudson, as it does the St. Lawrence, at the beginning of winter, and is there called the Tom Cod or Frost-fish. It is one of these fishes, apparently, which inhabit waters of no great depth, and, except during the an-

nual migration, remains in salt water the whole year. All through the summer it may be caught on the shores of the lower St. Lawrence. The writer has often fished for them, from July to September, from the wharf at Rivière du Loup, and the rocks between there and Cacouna. They come up in great numbers with the rising tide, and like the ordinary cod, are voracious feeders, taking almost anything in the shape of bait. In December, however, they ascend to fresh water, reaching Quebec and Three Rivers about Christmas, the fishery lasting until about the 10th January. At Quebec they turn into the estuary of the River St. Charles with every tide, and the ice is dotted over with a village of *cabanes*, set up to shelter the fishers, who gather a large harvest while the migration lasts. Multitudes, however, go past Quebec, continuing their progress along the North Shore until they reach Three Rivers, but pay a heavy tribute to the *habitans* on the way. At Three Rivers they go up the St. Maurice river in shoals, as far as the rapids of the Forges, after which all trace of them is lost. We are not aware whether they have been taken above Lake St. Peter.

Strange to say, on passing out of tide water they swim near the surface, contrary to their usual habit of swimming near the bottom. This peculiarity gives the *habitans* an opportunity of taking them in great numbers. Large frames six feet high and two or three feet square, filled in with wickerwork, and open on one side some distance from the bottom, are plunged in through holes cut in the ice. The opening in the frame is placed towards the advancing shoals, and the trap is soon withdrawn, filled with the writhing tommy cods. In this way they are secured by the sleighload. On the St. Maurice, cabins are built, in which the fisherman eats and sleeps, waging war on the "petits morues" until they cease to pass. None are caught on their return. They seem to scater and seek the deeper parts of the river, and the fishery is over, in fresh water at least, until the following December.

It has been stated above, that doubts have been entertained as to whether this fish is a distinct species from the Cod. Even experienced naturalists have had these doubts. But the facts above given seem to make the matter a certainty. The annual migration into fresh water (although contrary to the general habit of the cod family, as far as known) must be for the purpose of spawning. The fish, when

taken in winter, are full of eggs, and ready to propagate, and instinct drives them up into fresh water for that purpose. On the St. Lawrence, they ascend the tributary rivers on the North Shore with this end in view, but in some of them, at least, they cannot penetrate very far. They can go only a few miles up the St. Charles at Quebec, and in the St. Maurice there are falls about fifteen miles up which would bar their progress. Some of the other rivers between Three Rivers and Quebec may be more accessible to them. The conditions under which the spawn is deposited are, however, unknown.

Mr. Sulte says that the Tommy Cod has been an article of food in Canada ever since the French colonists arrived, and no doubt it was relished by the Indians long before that time. No diminution in the supply has been noticed. To-day the quantities used, principally by the French-Canadian population, are very great, and as Jack Frost comes to help, and preserves the fish in the best manner possible, none of this valuable food supply is wasted.

H. K. C.

BIRDS OF WESTERN ONTARIO.

SIR,—Since the appearance of your January number I have been requested to explain two points in the list of Birds of Western Ontario, and have pleasure in doing so: 1st.—As regards the common Tern, it appears in the Hamilton list as *Sterna Wilsoni*, and in the London list as *Sterna fuvialtilus*, both names were taken from the Smithsonian catalogue, but were taken at different dates, and the name had been changed in the interval. To be strictly correct in following the Smithsonian nomenclature, we should drop the *Wilsoni* and adopt the *fuvialtilus* as being the most recent, and let us hope that there will soon be an end of these frequent changes in specific names which are so perplexing to the student. 2nd.—As regards the large Rails, the specimen referred to in the Hamilton list was brought me by a local sportsman who said it was the only one of the kind he had ever seen here, but he had often shot them at Baptiste Creek; that they bred there; this was to all appearance the Clapper Rail, as the measurement as also the bleached-worn appearance of the plumage agreed with the descriptions given of that species, and the entry was made for the list in accordance with these facts. Whether I was strictly correct or not in the identification will probably not be known, as the specimen referred to was lost, and neither of the

large rails has been found here since that time; the one which breeds at Baptiste Creek and the St. Clair marshes is the king rail, *Rallus elegans*.

I have to record the capture within the past ten days of a second specimen of the Barn Owl, *Strix flammea*; this was a female shot at a farm-house near Dundas, about four miles from where the other was obtained. It is quite possible that this pair may have left their home in the south in company, bent on a voyage of discovery; if so, they have met the fate which frequently befalls adventurers in new countries, viz.: been skinned by the natives.

Pine grosbeaks have been very abundant round the city since the middle of January; they are nearly all in the grey plumage, being either females or immature males. The appearance of these birds in such numbers may be taken as an indication of the severity of the winter in the north as I have not heard of their being here at all for many years past.

Your truly,

T. MOLLWEAITH.

Cairnbrae, Hamilton, O., 14th Feb., 1883.

CROW BLACKBIRDS.

Your correspondent in the January No. of the "C. S. & N.," Mr. Ernest D. Wintle, probably refers to but one species of grackle in his remarks under the above caption. The Boat-tailed Grackle is a Southern species, not yet recorded as found in Canada, I believe. The Purple Grackles are abundant in Canada, and the "boat-like" spreading of the tail may be commonly observed during the love season of these birds, when the males thus display themselves, both on the wing and strutting upon the ground. I have often watched these grackles in the city of Three Rivers, P. Q., where they breed abundantly, and being unmolested there, are very tame, feeding upon the streets and in gardens. The males are larger and of handsomer plumage than the females, and the contrast is quite noticeable.

The Rusty Grackle, a smaller species is also found in Canada, but Mr. Wintle's remarks will not apply to this bird.

The Boat-tailed Grackle exceeds in size the Purple Grackle, especially in length, and would never be confounded with any of our smaller North American Grackles. In my catalogue of the "Birds of Maine" I have recorded a single occurrence of the Boat-tailed Grackle in this State, and I do not know of any other record of the species occurring so far north.

Portland, Maine.

EVERETT SMITH.

In answer to Mr. Wintle's query in the January No., I have been misled by the same bird, *Quiscalus purpureus*, but seeing one approaching with his tail spread one day when I was shooting, I took him in the act, and of course he proved to be merely an ordinary crow blackbird. Q. major inhabits the South Atlantic and Gulf States, never ascending to New England, and is strictly maritime.

W. E. SAUNDERS.

We have only one species of Crow Blackbird in Canada (*Quiscalus purpureus*). The peculiar spreading of the tail sometimes noticed in the males of this species has led to their being confounded with the Boat-tailed Grackle (*Quiscalus major*), which is a larger and more southern species. The Bronzed Grackle first described by Ridgway as a subspecies (*Quiscalus purpureus aneus* Ry), also occurs here, being associated with *purpureus* throughout the whole range of the latter. The difference between the two birds appears to be only a matter of color, and as the Bronzed is not confined to any particular locality, many ornithologists do not recognize it as a geographical variety.

Montreal.

W. W. DUNLOP.

FROM BULL. NUTT. ORN. CLUB. Vol. VII, No. 4.
Oct., 1882.

LIST OF BIRDS ASCERTAINED TO
OCCUR WITHIN TEN MILES FROM
POINT DE MONTS, PROVINCE OF
QUEBEC, CANADA; BASED CHIEFLY
UPON THE NOTES OF NAPOLEON
A. COMEAU.

BY C. HART MERRIAM, M. D.

Point de Monts is the southward termination of a high rocky promontory that separates the river from the Gulf of St. Lawrence, on the north shore. It is in latitude 49° 19' north. The country is well wooded, the forests consisting chiefly of spruce (both white and black) and balsam. Scattered about are a few birches, poplars, cedars, and tamaracks; and on a sandy terrace near the Godbout River is a quantity of the northern scrub pine (*Pinus banksiana*) that here attains a height of thirty and sometimes forty feet. The region is so far north that not only are the oaks and hickories absent, but even the hardy beech and maple do not grow here.

I visited this section of the coast in July, 1881, and again in July, 1882; and with the observations made at these times I have in-

corporated the notes kindly placed at my disposal by Mr. Napoleon A. Comeau, guardian of Godbout.

The nomenclature followed is that of the second edition of Dr. Coues's Check List of North American Birds.

1. *Turdus migratorius*; Robin. A common summer resident. Arrives about the first of May, and remains till late in November. Seen Dec. 22, 1879.
2. *Turdus unalasce nanus*; Hermit Thrush. Tolerably common; breeds.
3. *Turdus ustulatus swainsoni*; Olive-backed Thrush. Not uncommon; breeds.
4. *Sialia sialis*; Blue-bird. Extremely rare. During a residence of many years at Godbout, Mr. Comeau has seen but one pair of these birds; they nested in a stump near his house in July, 1880.
5. *Regulus calendula*; Ruby-crowned Kinglet. A male was shot June 4, 1882.
6. *Parus atricapillus*; Black-capped Chickadee. A common resident.
7. *Parus hudsonicus*; Hudsonian Chickadee. A common resident, like the last.
8. *Sitta canadensis*; Red-bellied Nuthatch. Tolerably common in winter, but not observed in summer.
9. *Eremophila alpestris*; Horned Lark. First seen April 21, 1882, after which they were common for about three weeks and then disappeared. I found a young one, dead, at Godbout in July, 1881.
10. *Anthus ludovicianus*; Titlark. Tolerably common summer resident, and doubtless breeds. I have seen flocks of them in July feeding on the beach at low water. First seen May 7, 1882.
11. *Helminthophila peregrina*; Tennessee Warbler. A tolerably common summer resident. First shot June 6, 1882.
12. *Dendroica aestiva*; Summer Warbler. Not very common. First seen June 6, 1882.
13. *Dendroica virens*; Black-throated Green Warbler. A tolerably common summer resident.
14. *Dendroica coronata*; Yellow-rumped Warbler. A rather common summer resident. First seen May 29, 1882.
15. *Dendroica blackburne*; Blackburn's Warbler. Rather rare. Shot June 9, 1882.
16. *Dendroica striata*; Black-poll Warbler. Rare. Mr. Comeau shot a male, June 7, 1882.
17. *Dendroica maculosa*; Black-and-Yellow Warbler. The commonest Warbler, breeding abundantly. Earliest seen May 29, 1882.
18. *Sialurus naevius*; Water Thrush. Rather rare. Shot June 6, 1882. Others seen.
19. *Geothlypis trichas*; Maryland Yellow-throat. Not common. Saw two in the clearing about Mr. Allan Gilmour's camp on the Godbout.
20. *Myioidictes pusillus*; Black-capped Yellow Warbler. Rather rare. Shot June 9, 1882. Others seen.
21. *Myioidictes canadensis*; Canadian Flycatching Warbler. A tolerably common summer resident.
22. *Setophaga ruticilla*; Redstart. Tolerably common. First seen June 9, 1882.

23. *Hirundo erythrogastra horreorum*; Barn Swallow. Rare, and not known to breed. Mr. Comeau shot one May 29, 1882.

24. *Iridoprocne bicolor*; White-bellied Swallow. Common; breeds plentifully. First seen May 12, 1882.

25. *Petrochelidon lunifrons*; Cliff Swallow. A small colony nested in the deserted Hudson's Bay Trading Post at Godbout this year.

26. *Ampelis cedrorum*; Cedar-bird. A tolerably common summer resident.

27. *Lanius borealis*; Great Northern Shrike. Occurs, but is not known to breed.

28. *Pinicola enucleator*; Pine Grosbeak. A tolerably common resident. In autumn it feeds extensively upon the berries of the mountain ash. I have already published a note on the breeding of this species at Godbout.*

29. *Carpodacus purpureus*; Purple Finch. Not very common. First seen April 26, 1882.

30. *Loxia leucoptera*; White-winged Crossbill. Tolerably common, but somewhat irregular in appearance. I found this species to be very abundant here in July, 1881, while in July, 1882, I did not see any.

31. *Agiothys linaria*; Red-poll. Very abundant in winter, large flocks being seen nearly every day. They all seem to move in one direction, following the shore westward.

32. *Chrysomitris pinus*; Pine Linnnet. Generally common, but somewhat irregular.

33. *Astragalinus tristis*; American Goldfinch. Rather rare. I saw a small flock in July, 1882.

34. *Plectrophanes nivalis*; Snow Bunting. Very common in flocks in winter. Seen as late as the middle of May.

35. *Centropus lapponicus*; Lapland Longspur. Large flocks of this species appear on this part of the coast during the latter part of April, remaining till about the middle of May. They are then very abundant, occurring both alone and in flocks with the preceding.

36. *Passerculus sandvicensis savanna*; Savanna Sparrow. Tolerably common, breeding on the thinly grassed sandfields about the mouth of the Godbout. Mr. Comeau shot one as early as April 21, 1882.

37. *Melospiza fasciata*; Song Sparrow. A rather common summer resident in suitable places, arriving early in May. Particularly numerous in the clearing about Mr. Allan Gilmour's camp on the Godbout.

38. *Junco hiemalis*; Black Snowbird. Very common. First seen May 16, 1882.

39. *Zonotrichia albicollis*; White-throated Sparrow. The commonest Sparrow, breeding everywhere. First seen May 14, 1882. This bird is the "Nightingale" of the Canadians.

40. *Zonotrichia leucophrys*; White-crowned Sparrow. Breeds, but is not common.

41. *Agelaius phoeniceus*; Red-shouldered Blackbird. Very rare. The only one ever seen here was a female, and was shot by Mr. Comeau May 23, 1882.

42. *Xanthocephalus icterocephalus*; Yellow-headed Blackbird. An accidental straggler from the west. Mr. Comeau shot a male of this species in his door yard, at Godbout, early in September, 1878.†

43. *Quiscalus purpureus*; Crow Blackbird. Rare. Sometimes seen in flocks in spring.

44. *Corvus corax*; Raven. A common resident. May 12, 1882, Mr. Comeau found one of their nests on the face of a cliff about half-way between Godbout and Point de Monts. It contained four full-fledged young that must have been at least three or four weeks old.

45. *Corvus frugivorus*; Crow. A common summer resident, sometimes wintering. I have observed that the Crows here find much of their food along the beach at low water.

46. *Cyanocitta cristata*; Blue Jay. Resident but not very common.

47. *Perisoreus canadensis*; Canada Jay. A tolerably common resident.

48. *Tyrannus carolinensis*; King-bird. Not rare. Earliest seen June 9, 1882.

49. *Empidonax flaviventris*; Yellow-bellied Flycatcher. I have seen a specimen that Mr. Comeau shot June 15, 1882.

50. *Chordeiles popetius*; Night-hawk. A common summer resident. First seen June 5, 1882. I saw Night-hawks flying about overhead nearly every day while at Godbout, both in July, 1881, and July, 1882.

51. *Chatura pelagica*; Chimney Swift. Generally tolerably common, but not seen this year.

52. *Ceryle alcyon*; Belted Kingfisher. A rather common summer resident, arriving about the first of May. About June 13, 1882, Mr. Comeau found three Kingfisher's nests in a bank, and each contained seven fresh eggs.

53. *Hylotomus pileatus*; Pileated Woodpecker. Very rare. Mr. Comeau has shot but one here.

54. *Picus villosus*; Hairy Woodpecker. A tolerably common resident, being particularly fond of the burnt-over scrub-pine barren near Godbout.

55. *Picus pubescens*; Downy Woodpecker. A tolerably common resident, like the last,

56. *Picoides arcticus*; Black Three-toed Woodpecker. Resident; not rare.

57. *Colaptes auratus*; Golden-winged Woodpecker. A tolerably common summer resident. First seen May 14, 1882.

58. *Bubo virginianus*; Great Horned Owl. A rather common resident.

59. *Asio wilsonianus*; Long-eared Owl. Rare. Mr. Comeau shot three in May, 1877 or 1878.

60. *Asio accipitrinus*; Short-eared Owl. A rather rare summer resident. Earliest seen May 9, 1882.

61. *Strix nebulosa*; Barred Owl. A tolerably common resident.

62. *Nyctea scandiaca*; Snowy Owl. Very irregular in appearance; sometimes very abundant in winter, and sometimes not seen for several years. Mr. Comeau shot one May 17, 1882, and Mr. Gregoire Labrie killed one May 31, 1880. These are the latest dates at which they have been seen in this section.

63. *Surnia funerea*; Hawk Owl. Common in winter, generally appearing in November and not remaining later than February.

64. *Nyctala tengmalmi richardsoni*; Richardson's Owl. A common winter resident, and very tame. This Owl has a low liquid note that resembles the sound produced by water slowly dropping from a height; hence the Montagne Indians call it *pillip-pile-tahish*, which

* See this Bulletin, Vol. VII, pp. 120, 121.

† See this Bulletin, Vol. VI, p. 246.

means "water-dripping bird." These Indians have a legend that this was at one time the largest Owl in the world, and that it had a very loud voice. It one day perched itself near a large waterfall and tried not only to imitate the sound of the fall but also to drown the roaring of the torrent in its own voice. At this the Great Spirit was offended and transformed it into a pigmy, causing its voice to resemble slowly dripping water instead of the mighty roar of a cataract.

65. *Nyctala acadica*; Saw-whet Owl. Not very common. In winter Mr. Comeau once saw one of these little Owls fly out from within the carcass of a great northern hare that had been caught in a snare. The Owl had eaten away the abdomen and was at work within the thoracic cavity when frightened away.

66. *Circus cyaneus hudsonius*; Marsh Harrier. A tolerably common summer resident. Three individuals were seen as early as May 6, 1882.

67. *Astur atricapillus*; Goshawk. Not rare.

68. *Falco sacer obsolatus*; Labrador Gyrfalcon. Mr. Comeau has killed several of these rare Falcons in the vicinity of Godbout.

69. *Falco columbarius*; Pigeon Hawk. Not rare, and doubtless breeds.

70. *Falco sparverius*; Sparrow Hawk. Rare. One shot May 5, 1882.

71. *Archibuteo lagopus sanctijohannis*; Rough-legged Buzzard. Breeds, and is rather common. The southward migration commences about the last of September and continues into November. During this period large numbers of these Hawks are constantly passing over this part of the coast on the way to their winter quarters.

72. *Pandion haliaetus*; Fish Hawk. A few pairs of Fish Hawks breed in this vicinity every year. They were first seen May 2, 1882. They depart in November.

73. *Aquila chrysaetus*; Golden Eagle. Breeds, and is not particularly rare. Mr. Comeau has shot three, and knows of half a dozen that were caught in steel-traps.

74. *Haliaetus leucocephalus*; White-headed Eagle. Tolerably common; breeds. They arrive in March, and remain till December or January. Mr. Comeau found a nest, early in June, that contained three young about the size of Crows.

75. *Ectopistes migratorius*; Wild Pigeon. A rather rare and very irregular visitor.

76. *Zenaidura carolinensis*; Carolina Dove. Of this southern species Mr. Comeau has killed two at Godbout; the first, a male, he shot October 10, 1881, and the second, a female, June 6, 1882.

77. *Canace canadensis*; Spruce Grouse. A resident species, but rather rare.

78. *Bonasa umbella*; Ruffed Grouse. A resident, like the last, but not common. This appears to be the northern limit of the Grouse on the east coast, and I was unable to find any evidence of its presence lower down along the north shore of the gulf.

79. *Lagopus albus*; Willow Ptarmigan. Very abundant during the early part of some winters, but during other years it does not occur at all. They generally arrive about the first of December, and a few remain till the first of May. They are always most abundant in December, and Mr. Comeau once killed six hundred before Christmas! He has shot as many as eighty-two in a single morning.

80. *Squatrola helvetica*; Black-bellied Plover. Rather rare and irregular in occurrence. Mr. Comeau has shot it in May and September.

81. *Charadrius dominicus*; Golden Plover. Tolerably common in September, and sometimes seen in spring.

82. *Agialites vociferus*; Killdeer Plover. Mr. Comeau says that this species breeds and is not rare.

83. *Agialites semipalmatus*; Ring-neck. Occurs in spring.

84. *Streptas interpres*; Turnstone. Tolerably common in September.

85. *Stercorarius wilsoni*; Wilson's Phalarope. Mr. Comeau tells me that this Phalarope occurs during the fall migration, but is not common.

86. *Phalaropus fulicarius*; Red Phalarope. Not rare in September.

87. *Gallinago wilsoni*; Snipe. A rather rare migrant. Earliest killed May 9, 1882.

88. *Macrorhamphus griseus*; Red-Breasted Snipe. Occurs during the fall migration.

89. *Ereunetes pusillus*; Semipalmated Sandpiper. Tolerably common. First seen during the latter part of May, and common in August and September.

90. *Actodromas minutilla*; Least Sandpiper. Rather common in spring and fall.

91. *Actodromas maculata*; Pectoral Sandpiper. Occurs in fall, but is not common.

92. *Actodromas bonapartii*; White-rumped Sandpiper. Mr. Comeau shot one May 31, 1882.

93. *Calidris arenaria*; Sanderling. Occurs in the fall migration.

94. *Totanus melanoleucus*; Greater Tattler. Common spring and fall. Earliest shot May 9, 1882. Passes south in September.

95. *Totanus flavipes*; Yellow-shanks. Common during the migrations. Occurs with the preceding.

96. *Rhyacophilus solitarius*; Solitary Tattler. Tolerably common, breeding about the fresh water lakes and streams.

97. *Tringoides macularius*; Spotted Sandpiper. A tolerably common summer resident.

98. *Numenius borealis*; Eskimo Curlew. Common in August and September.

99. *Numenius hudsonius*; Hudsonian Curlew. Rather rare. Mr. Comeau has shot it in August.

100. *Ardea herodias*; Great Blue Heron. Rather rare, and generally seen in September.

101. *Ardea egretta*; Great White Egret. Accidental straggler from the south. One seen June 9, 1882, on an island in Godbout River.

102. *Botaurus mugilans*; American Bittern. Rare. Mr. Comeau has shot several here, and tells me that they are common at Manacougan, thirty miles west of Godbout.

103. *Cygnus* sp.—? A swan was shot at Point de Monts by an Indian in 1870.

104. *Chen hyperboreus*; Snow Goose. Rare. Mr. Comeau has shot it in October.

105. *Bernicla brenta*; Brent Goose. Breeds, and is by no means rare. Arrives in April, remaining late November and sometimes December.

106. *Bernicla canadensis*; Canada Goose. A common migrant, arriving during the latter part of March and departing in November. They breed at Natasbqua, Western Labrador.

107. *Anas obscura*; Black Duck. A tolerably common summer resident, breeding about the fresh water lakes.

108. *Dafila acuta*; Pintail. The only one Mr. Comeau ever saw here he shot June 7, 1882.

109. *Querquedula carolinensis*; Green-winged Teal. Rare here, but they breed at Manacougan.

110. *Querquedula discors*; Blue-winged Teal. Rare, but oftener seen than the preceding. Has been shot early in May.

111. *Fuligula affinis*; Scaup Duck. Tolerably common in October.

112. *Fuligula collaris*; Ring-neck Duck. Mr. Comeau has killed two in spring.

113. *Clangula glaucium*; Golden-eye. A resident species, and tolerably common. Breeds on fresh water only. Remains throughout the winter.

114. *Clangula islandica*; Barrow's Golden-eye. A common resident, breeding, like the foregoing on fresh water, and remaining on the Gulf all winter.

115. *Clangula albeola*; Butter-ball. Rare. Has been shot in October.

116. *Harelda glacialis*; Old Wife. Resident. Very abundant in winter, the largest flocks being seen in December, January, and February. Mr. Comeau took one in full summer plumage as early as April 23, 1882. Tolerably common in summer, and supposed to breed.

117. *Histrionicus minutus*; Harlequin Duck. Rare, and only seen during the latter part of April and early in May. This year Mr. Comeau saw two April 16, and shot one May 8, out of a flock of four.

118. *Somateria mollissima*; Eider Duck. A permanent resident, but rather rare.

119. *Somateria spectabilis*; King Eider. Rare. Has been known to breed.

120. *Edemia americana*; Black Scoter. Common from early in April till some time in November. They do not remain through the winter.

121. *Edemia fusca*; Velvet Scoter. A common resident. The largest flocks are seen in April and November, and the species is common all the year round.

122. *Edemia perspicillata*; Surf Duck. Very common from April to November, but does not winter. The males greatly preponderate over the females in this species, and Mr. Comeau tells me that the proportion is always about seven males to one female.

123. *Mergus merganser*; Shell-drake. Tolerably common, breeding about the fresh water.

124. *Mergus serrator*; Red-breasted Merganser. Very common, frequenting both fresh and salt water.

125. *Sula bassana*; Gannet. Occasional. I have found it breeding in numbers at the west end of Anticosti, but do not think it nests farther up in the Gulf.

126. *Phalacrocorax carbo*; Common Cormorant. Rare, but Mr. Comeau has shot several here.

127. *Phalacrocorax dilophus*; Double-crested Cormorant. Mr. Comeau shot a female May 19, 1882.

128. *Stercorarius pomatorhinus*; Pomatorhine Jaeger. Rare.

129. *Stercorarius parasiticus*; Parasitic Jaeger. Rather rare. Mr. Comeau shot six in one day about the middle of May, 1874.

130. *Larus glaucus*; Glaucous Gull; Ice Gull. Rather rare. Usually seen in February, March, and April. I have a handsome male which was shot by Mr. Comeau April 29, 1882.

131. *Larus leucopterus*; White-winged Gull. Not

common. Commonly appears and disappears with the last. Mr. Comeau has shot it as late as May 1.

132. *Larus marinus*; Great Black-backed Gull. Breeds, and is tolerably common. It is absent only in January and February. July 17, 1882, I found one of their nests on Great Baile, one of the Seven Islands. It consisted of a little coarse grass placed in a slight depression in the rock, and was lined with a sort of pad, about four inches in diameter, of beautiful soft down, on which reposed a single egg. The egg had been incubated, but failed to hatch.

133. *Larus argentatus smithsonianus*; Herring Gull. Very abundant, breeding plentifully on suitable rocks. Arrives about the middle or latter part of April, remaining into November.

134. *Rissa tridactyla*; Kittiwake. Breeds abundantly. Arrives late in April or early in May, remaining into December. This and the preceding are the commonest Gulls along this part of the coast, and are constantly seen, both singly and in immense flocks. They follow the receding tide and cover the sand flats that are exposed at low water, feeding upon the molluscs and other marine animals that abound in such situations. I have seen more than a thousand at one time.

135. *Pagophila eburnea*; Ivory Gull. Very rare. Mr. Comeau shot a male in April, 1877, at Point de Monte. The specimen was presented to the Museum at Besimins Mission, where it is now preserved.

136. *Chroicocephalus philadelphia*; Bonaparte's Gull. A tolerably common summer resident, arriving late in May.

137. *Sterna macrura*; Arctic Tern. Very abundant at certain places, where it breeds. Mr. Comeau once killed sixteen at one shot, flying. It arrives early in June.

138. *Cymochorea leucorhoa*; Leach's Petrel. Common in summer.

139. *Colymbus torquatus*; Loon. Common. Breeds about the fresh-water lakes of the interior. I saw many, and heard others, in the Gulf, near Point de Monte, in July. Earliest seen April 13, 1883.

140. *Colymbus septentrionalis*; Red-throated Diver. Common, breeding with the last, but not arriving so early, usually coming in May.

141. *Podiceps griseigena holballi*; Red-necked Grebe. Rare; one shot in September.

142. *Podilymbus podiceps*; Dab-chick; Hell Diver. Not rare; killed both spring and fall.

143. *Fratercula arotica*; Puffin; Sea Parrot. Not common as far up as Point de Monte, but very abundant on the Mingan Islands, where they breed by thousands.

144. *Alle nigricans*; Dovekie. Very abundant in flocks during some winters, arriving early in December and remaining till some time in February. During other winters it is rare or does not occur at all.

145. *Uria grylle*; Black Guillemot; Sea Pigeon. A common resident, breeding not only here, but even on the islands off the mouth of the Saguanay, an hundred and fifty miles farther up the St. Lawrence.

146. *Lomvia troile*; Foolish Guillemot; Murres. Like the Dovekie, the Murres is sometimes very abundant here in winter, while during other winters it does not occur at all. It is not wary, and does not even know enough to keep out of the way of dogs along the shore. It is well named the "Foolish" Guillemot, for both its habits and appearance deserve this appellation. In fact it looks like a perfect idiot, swimming over on one side as if one leg were broken, and staring vacantly at its enemies without attempting to escape. Its *tout ensemble* is stupid and gawky.

During the winter of 1875 they were so exceedingly abundant that Mr. Comeau shot about a thousand for their feathers, and his dog caught over fifty. They were all in very poor flesh, some being little more than animated skeletons, and a great many died and were washed ashore.

147. *Utamania torda*; Razor-billed Auk. Not common here, but breeds on the Mingan Islands.

COLEOPTERA FOUND IN THE PROVINCE OF QUEBEC.

By WILLIAM COUPER.

CLYTANTHUS *uricola*, Oliv.
CYRTOPHORUS *verrucosus*, Oliv.
EUDERES *picipes*, Fabr.
DESMOCERUS *palliatu*s, Forst.
STENOCORUS *lineatus*, Oliv.
CENTRODERA *decolorata*, Harris.
RHAGIUM *lineatum*, Oliv.
TOXOTUS 1 *Schaumii*, Lec.
 2 *vittiger*, Rand.
PACHYTA 1 *monticola*, Rand.
 2 *liturata*, Kirby.
ANTHOPHILAX 1 *attenuatus*, Hald.
 2 *viridis*, Lec.
ACMAEOPS 1 *trivittatus*, Say.
 2 *proteus*, Kirby.
 3 *pratensis*, Laich
GAUROTUS *cyanipennis*, Say.
TYPOCERUS 1 *zebratus*, Fabr.
 2 *velutinus*, Oliv.
 3 *sinuatus*, Newm.
LEPTURA 1 *emarginata*, Fabr.
 2 *plebeja*, Rand.
 3 *subhamata*, Rand.
 4 *lineola*, Say.
 5 *capitata*, Newm.
 6 *subargentatus*, Kirby.
 7 *zebra*, Oliv.
 8 *impura*, Lec.
 9 *6-maculata*, Linn.
 10 *nigrella*, Say.
 11 *carbonata*, Lec.
 12 *Canadensis*, Fabr.
 13 *rubrica*, Say.
 14 *circumdata*, Oliv.
 15 *vagans*, Oliv.
 16 *haematites*, Lec.
 17 *chrysocoma*, Kirby.
 18 *nigrolineata*, Bland.
 19 *proxima*, Say.
 20 *pedalis*, Lec.
 21 *vittata*, Germ.
 22 *nitidipennis*, Prov.
 23 *pubera*, Say.
 24 *sphaericollis*, Say.

25 *vibex*, Newm.
 26 *mutabilis*, Newm.
 27 *biforis*, Newm.
 28 *atrata*, Lec.
 29 *cordifera*, Oliv.
 30 *aspera*, Lec.
 31 *montivagans*, Couper.

The description of this *Leptura* is given in the Trans. Lit. and Hist. Soc., Quebec, 1864. It may be a var. of *6-maculata* or a northern form whose elytral markings are not permanent.

EVODINUS *monticola*, Rand.
BELLAMIRA *scalaris*, Say.
STRANGALIA *luteicornis*, Fabr.
MONOHAMMUS 1 *titillator*, Oliv.
 2 *confusor*, Kirby.
 3 *scutellatus*, Say.
 4 *marmoratus*, Kirby.

L'Abbé Provancher did not give this beautiful insect in his "Petite Fauna Entomologique du Canada." The insect occurs at Quebec. My specimens were taken in the latter city.

DORCASHEMA *nigrum*, Say.
GOES *oculatus*, Lec.
LEPTOSTYLUS 1 *aculifer*, Say.
 2 *macula*, Say.
LEPTARGUS *angulatus*, Lec.
GRAPHISURUS 1 *triangutifer*, Hald.
 2 *faciatus*, DeGeer.
POGONOCHERUS 1 *pencillatus*, Lec.
 2 *mixtus*, Hald.
EUPOGONIUS *subarmatus*, Lec.
SAPERDA 1 *obliqua*, Say.
 2 *calcarata*, Say.
 3 *candida*, Fabr.
 4 *vestita*, Say.
 5 *tridentata*, Oliv.
 6 *lateralis*, Fabr.
 7 *moesta*, Lec.
 8 *concolor*, Lec.
OBEBREA 1 *amabilis*, Hald.
 2 *tripunctata*, Fabr.
TETRAOPES *tetraophthalmus*, Forst.
DONACIA 1 *Harrisii*, Lec.
 2 *hirticollis*, Kirby.
 3 *magnifica*, Lec.
 4 *distincta*, Lec.
 5 *subtilis*, Kuntz.
 6 *confusa*, Lec.
 7 *emarginata*, Kirby.
 8 *Kirbyi*, Lec.
ORSODACHNA 1 *Childreni*, Kirby.
 2 *atra*, Ahrens.

Continued from page 204.

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